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EASTERN EDITION.

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VOL. XX. NO. 19.

JULY 1, 1897.

TERMS { 50 CENTS A YEAR.
24 NUMBERS.

July Contest

4 First Prizes : ONE FOR WOMEN
ONE FOR MEN

ONE FOR GIRLS : 4 Bicycles Free
ONE FOR BOYS

And a Fine Book for EVERY ONE who
Guesses the Missing Word.

The prizes are given for supplying the ONE word
missing in the following sentence:

"The inhabitants of our — country have
lately had a useful lesson on this subject"

The sentence is from the sayings of a
great American statesman. It is easy and
the missing word is simple. See page 19.

FOR ONE MONTH ONLY Closes July 31

The Conditions The conditions pre-
cedent for sending a
guess at the missing word is that each and
every guess must be accompanied by a sub-
scription to Farm and Fireside. (Any of the
offers in this or past issues may be accepted.)

The 4 Bicycles will be awarded to the
FIRST woman, the
FIRST man, the FIRST girl and the FIRST boy
who name the missing word. Therefore, it
will be wise to send your guess without delay.

For a full description of the \$100 bicycles write
to the National Sewing Machine Co., Belvidere,
Illinois. Their fine catalogue will be sent free.

For full particulars see advertisement on page 19.

Publishers FARM AND FIRESIDE.

WITH THE VANGUARD

In a recent letter to the New York "Sun," on the pay-
ment of trade balances, Mathew Marshall says:

"The excess of this country's exports over its imports
has been, since July 1, 1896, about \$300,000,000 in mer-
chandise and \$28,000,000 in silver. Had the payment of
this balance in our favor been made in gold we should
have imported that metal to the value of \$328,000,000,
whereas, in fact, our net imports of it during the period
mentioned have been less than \$60,000,000. The differ-
ence is partly accounted for by the interest and dividends
on investments remitted to foreign holders, and by
freights and passenger fares earned by foreign shipping;
but it is also made up to a large extent by the return
of securities to this market for sale. Great Britain,
on the other hand, imported in the year 1896 merchandise
to the value of \$700,000,000 more than her exports,

and yet her net exports of gold for the year were only
\$30,000,000, the difference of \$670,000,000 representing
the income of her people from the earnings of their ships
and from their investments in foreign countries, as well
as their sales of those investments in foreign markets.

"To the foreign holding of investments in this country
is due the fact that we need every year to make much
larger exports of gold in addition to merchandise and
silver than we otherwise should. Thus, in 1893, when
the nominal trade balance in our favor was about \$25,-
000,000, we were obliged to export \$87,500,000 in gold.
In 1894 the trade balance to our credit was \$265,000,000,
but we still exported gold to the amount of \$4,500,000.
In 1895 the excess of our exports was \$102,000,000, but
we had to export \$31,000,000 in gold besides. In 1896
our credit trade balance was \$120,000,000, and yet our
gold exports were \$79,000,000. Precisely how much
merchandise and silver is required every year to pay
what we owe abroad for interest and dividends and for
the services of foreign shipping can, therefore, be only
guessed at, but the indications are that it is steadily
becoming less, and that eventually this country will, like
Great Britain, be so full of rich people that we shall, as
a nation, be creditors instead of being, as we are now,
debtors.

"That time, however, is still too far off for us to begin
now to count upon it. At the moment, indeed, in the
absence of our usual activity of enterprise, we have
capital enough of our own to meet all demands for it,
and more, too, but this state of things will not always
continue. The immense undeveloped resources of the
country offer too inviting a field for money-making to be
forever neglected. With or without the new tariff
and with or without a reform of the currency, our people
are not going to sit down and do nothing but bewail
their reverses. Sooner or later a few choice spirits will



F. H. SNOW, PH.D., LL.D.

lead in breaking up the prevailing stagnation, and the
rest will follow. It has happened so a dozen times
before in our history, and it will happen again. When
it happens we shall want to invite the assistance of
foreign capital, as we have on previous similar occasions,
and we ought to prepare to get it and to keep it on the
most advantageous terms.

"No argument is needed to show that the essential
requisite to securing foreign capital for use in this coun-
try is to inspire confidence in its owners that it will be
safe in our hands. Not only must they be assured that

the money which we ask them to lend us will be wisely
employed, or, at least, so wisely that its borrowers will
be able to pay the interest upon it which they agree to
pay, but its payment must also be assured in money
of the same value as that which is lent."

JUNE 3d was Farmers' Jubilee Day at Wooster. The
auspicious occasion was the dedication of the "Admin-
istration Building" of the Ohio Agricultural Experiment
Station. With impressive ceremonies, consisting in part
of a civic and military parade and appropriate addresses
by distinguished men, this beautiful building was for-
mally dedicated to the noble use for which it was con-
structed—the advancement of agriculture. It is the
main, or office, building on the magnificent farm of four
hundred and seventy acres that is devoted wholly to
experiment work in agriculture for the direct betterment
of farming as a business, and indirectly for the benefit
of the common welfare of the whole country.

In 1881 Colonel J. H. Brigham, then a member of the
Ohio assembly, and Professor Wm. R. Lazenby framed
the bill under which the Ohio experiment station was
organized, it being the sixth established in the United
States. In 1891 and 1892 it was removed from the
university farm at Columbus to a most beautiful and
serviceable location in Wayne county. During its whole
history the Ohio station has been under able and success-
ful management, and to-day it ranks among the best in
the country. The members of its board of control have
been untiringly devoted to its best interests. The station
workers have succeeded admirably in their labors to
make the institution one of permanent, practical useful-
ness to the farmers of Ohio, and, indeed, of the whole
country. They deserve to have placed in their hands
the best equipment possible. Director Thorne and the
other members of the station staff are to be congrat-
ulated on their new home.

One of the speakers, Dr. E. W. Allen, in the course of
his address said:

"The enduring character of the buildings which we
have gathered here to dedicate itself bespeaks perma-
nency. Born of a need felt by the farmer for assis-
tance in coping with the elements, the station has made
a steady, healthy growth, until at present it has reached
a point where it is indispensable to the farmer and
horticulturist."

CHANCELLOR F. H. SNOW, of the University of
Kansas, was born June 29, 1840, in Fitchburg,
Mass. His preparatory education was received in the
Fitchburg high school. He entered the freshman class
of Williams College in 1858, and graduated with the
highest honors in 1862. After teaching one year in
the Fitchburg high school he entered Andover Theolog-
ical Seminary, and graduated from that institution in
1866.

In the fall of the same year he entered the University
of Kansas as professor of mathematics and natural
science. Three years later he was made professor of
natural history, and devoted himself to the studies of
botany, entomology, climatology and ornithology up to
1890, when he was elected chancellor of the university.

Outside of his work as chancellor Professor Snow is
known chiefly as a botanist, entomologist and ornithol-
ogist. He has completed a catalogue of the birds of
Kansas, and has published a catalogue of the insects
of Kansas, Colorado and New Mexico. In his ento-
mological work he has discovered about two hundred
new species of insects of all orders, particularly the
lepidoptera and coleoptera.

Dr. Snow was married in Andover, Mass., to Miss
Jennie A. Aiken, of that place, and they are the parents
of five children, all of whom are living.

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The above rates include the payment of postage by us. All subscriptions commence with the issue on press when order is received.

Subscribers receive this paper twice a month, which is twice as often as most other farm and family journals are issued.

Payment, when sent by mail, should be made in Express or Post-office Money-orders, Bank Checks or Drafts. WHEN NEITHER OF THESE CAN BE PROCURED, send the money in a registered letter. All postmasters are required to register letters whenever requested to do so. DO NOT SEND CHECKS ON BANKS IN SMALL TOWNS.

Silver, when sent through the mail, should be carefully wrapped in cloth or strong paper, so as not to wear a hole through the envelop and get lost.

Postage-stamps will be received in payment for subscriptions in sums less than one dollar, if for every 25 cents in stamps you add one-cent stamp extra, because we must sell postage-stamps at a loss.

The date on the "yellow label" shows the time to which each subscriber has paid. Thus: Jan 98, means that the subscription is paid up to January 1, 1898; 15 Feb 98, to February 15, 1898, and so on.

When money is received, the date will be changed within four weeks, which will answer for a receipt.

When renewing your subscription, do not fail to say it is a renewal. If all our subscribers will do this, a great deal of trouble will be avoided. Also give your name and initials just as now on the yellow address label; don't change it to some other member of the family; if the paper is now coming in your wife's name, sign her name, just as it is on label, to your letter of renewal. Always name your post-office.

The Advertisers in This Paper.

We believe that all the advertisements in this paper are from reliable firms or business men, and do not intentionally or knowingly insert advertisements from any but reliable parties; if subscribers find any of them to be otherwise we should be glad to know it. Always mention this paper when answering advertisements, as advertisers often have different things advertised in several papers.

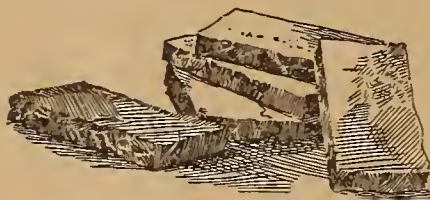
NOTES ON RURAL AFFAIRS.

Mushroom-growing. Mushrooms, gathered from the meadows or from cultivated beds alike, always are an enjoyable thing, and there are few people who would not like them. But there is also a great charm connected with growing them. The mystery that surrounds them and their growth is what seems an additional attraction. The mushroom, a regular jumping-jack, springs up all at once—over night. First you don't see it, and all at once there it is! But what you do see above ground is the fruit of the plant, not the plant itself. The latter grows under ground, and consists of a network of whitish threads—the mycelium, or spawn. I frequently dabble a little in mushroom culture, sometimes with and sometimes without much success; but I always find it interesting and pleasing.

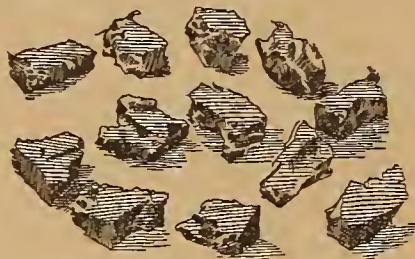
Mushroom Bulletins. Mr. William Falconer is one of our most noted experts in this field. His book on "Mushroom Culture," published by the Orange Judd Company a few years ago, is probably by far the best treatise on the subject in existence; but its price (\$1.50) was considered too high for many who only wanted to try the mushroom business on a very small scale. Now this same authority has written a pamphlet, "How to Grow Mushrooms," which is published for gratuitous distribution as Farmers' Bulletin No. 53 under the supervision of the division of vegetable physiology and pathology. It gives the gist of the whole business in a few pages of text interspersed with a number of telling illustrations. Your congressman will get this for you free of charge, or it can be had by addressing a request for it to the Department of Agriculture in Washington direct. If you are in any way interested in mushrooms, you want this bulletin. Besides this, it is promised that the subject of mushrooms will be further treated in a bulletin to be issued in a few months, which will be devoted to descriptions of edible and poisonous species, with special reference to their identification.

Wild Mushrooms.

The common meadow mushroom (Agaricus campestris) is easily recognized by anybody who has eyes to see. I know of no poisonous species that one could mistake for this old favorite. Last fall I gathered fine specimens of the meadow mushroom by the basketful in an old orchard, and we did enjoy them. Yet large quantities of them grow and die down without ever being gathered; in many cases simply because people are afraid of mushrooms, in others because they have not yet learned to appreciate them for food. If we have a rich old pasture-lot that does not from its own accord produce mushrooms, we may be able to make it do so by inserting pieces of spawn here and there. The bulletin does not say anything about this, but it is a simple and easy matter. Just buy a few pounds of brick-spawn, such as any seedsman keeps in stock. Only be sure it is freshly imported. It should show the bluish-white threads (mycelium) all through, and have a perceptible mushroom smell. These bricks measure about 8¾ by 5½ by 1½ inches, and weigh one pound four and one fourth ounces. Break them into pieces, as shown in illustration. Then with a spade cut into the sod, prying up a flap of it, drop a piece of spawn under it, and let



ENGLISH, OR BRICK, SPAWN.



BRICK BROKEN INTO PIECES READY FOR PLANTING.

the sod fall back into place. Repeat this in the richest spots of the pasture-lot, and await developments. If you do this job without delay, and the season is fairly favorable, you may look for the mushrooms in September or October.

Fertility of the Land.

Just at present there seems to be no lack of good literature on agricultural topics. Professor Roberts (whose ideas on "Tillage versus Maure" were alluded to in FARM AND FIRESIDE of June 1st) comes out with another book, the "Fertility of the Land," and a good one it is (one of the rural science series edited by Professor L. H. Bailey). Professor Roberts has much to say about plowing, and just as much about fitting the soil after plowing. My first experience with the soil was restricted almost entirely to loose, gravelly or sandy loams, and I had come to the conclusion that plowing was the chief work—about seven eighths—of fitting the soil for planting. It is only in later years that I had to deal with the stiffer kinds of soil, and I fully appreciate the truth of what Professor Roberts says about the need of thoroughness in fitting soils for planting. I quote some sentences:

"One of the chief objects in plowing is to pulverize the soil. The plow may invert it in the most perfect manner, and bury surface vegetation; but if it fails to do the greater part of the fining of the soil as well, and leave it in such a condition that the harrow and cultivator cannot complete the work in the cheapest and best manner, it is seriously defective. . . . The surface tillage which may be necessary to finish the land should be kept prominently in view when plowing. The manner of plowing sandy and friable lands matters little so far as the total cost of the whole season's tillage is concerned, but on tenacious soils the plowing often represents not more than one third to one fifth of the cost of suitably preparing the first eight inches of the surface for some kinds of plants. If a tenacious soil, covered with a tough sod, be plowed with the help of a colter attachment, and a furrow slice be nearly flat, it is nearly impossible to fit the land well until the sod has rotted and the land has

been replowed. . . . Plowing is poor that fails to do the greater part of the rough pulverizing, and to leave the surface in the best possible condition for the effective use of the implements which are to follow. This can certainly be done without sacrificing any of the other benefits which should be secured by plowing. The old couplet,

"He that by the plow would thrive
Himself must either hold or drive,

"has become obsolete. May not the following be substituted for it?

"He that would good plowing view
Should think what else is left to do."

This lesson of Professor Roberts should be more deeply impressed on our farm practices. Too many fields are planted without proper preparation. The roller, the disk-pulverizers, the various harrows, etc. (whatever seems to answer the purpose best), should be kept going until the field is as smooth and fine "as an ash heap," and this no matter what the crop to be planted may be. For common grain crops it may be even more necessary than for bood crops, as the former receive no after-cultivation, while the soil for the latter may yet be fined in some measure by means of cultivators and hoes. The most satisfactory grain-farming I have ever done was where I put the soil in as fine condition as if intended for garden crops. I usually finish every field with the Meeker harrow, in case of grains, after sowing.

Cows Dying

After Calving.

In this vicinity quite a large number of cows—good ones and well kept—have died shortly after calving, from a kind of apoplexy or paralysis. The cows seem all right. The disease comes on all at once, the animal loses its power of locomotion, one after another its organs become paralyzed, and in a few days all is over. Dr. C. D. Smead, whom I asked about this, says: "The trouble is parturient apoplexy produced by a combination of causes. The best of the cows are the ones that have this ailment. It can be largely prevented if cow-owners will, two weeks before the expected birth of the calf, give the cows three fourths of a pound of Epsom salts and one half ounce of gentian dissolved in a quart of water and poured down from a bottle. Repeat weekly until the calf is born. Then immediately give another dose." I shall be careful hereafter to use this preventive in every case.

T. GREINER.

SALIENT FARM NOTES.

Yesterday a farmer jumped upon me, as the wicked say, with both feet because prices of grain—corn and oats—are not away up and still climbing.

"You fellows," said he, "promised us good times—prosperity—as soon as you got control of the government! Where is your prosperity? Where are your good times? Corn selling at eighteen cents and oats at fifteen cents. I should think you would feel pretty cheap with such figures staring you in the face!"

It is customary for men to wax hot and use bad argument when touching upon things that are sometimes mixed in with politics, but that is foolish. Furthermore, the prices of corn and oats do not come within the sphere of politics, and are not regulated thereby to any appreciable extent. I asked my friend what he was doing to bring about prosperity, which, according to his ideas, seems to depend entirely upon the price of corn and oats. Are you growing more corn and oats when the markets are already overstocked with both? Are you going about complaining and berating the government because a glutted market, which you are doing your utmost to still further glut, does not improve?

Wouldn't it be better and more satisfactory all around for all of us to cease whining about low prices and berating the government because everything is not exactly as we would like it? Wouldn't it be better to make the best of things; to speak encouraging words to our neighbor; to take full advantage of our opportunities; to improve our methods, and try to manage our affairs in a careful, economical and businesslike manner? Let us keep in mind the fact that a good, hearty, honest patriotism and a careful, intelligent

management of our own affairs will do a good deal more toward bringing prosperity to both ourselves and the whole country than all the whining and wearisome complaining in the world.

I see that the price of good hogs ranges along at thirty to thirty-five cents for corn that is fed to them intelligently. I note also that the market for good bacon (clover and corn) hogs is not suffering from any glut. First-class milk-cows are wanted at high prices. Good horses—not spindle-legged racers that are just fast enough to get heated, but good, active draft animals—are in demand at figures that make those who are raising them feel good. Prices for good mutton—farm sheep—are creeping upward, with indications of a strong demand in the near future. Even wheat is a fair price, and the outlook seems to show that this price will be maintained, probably increased.

Dun & Co. report that the actual sales in leading houses in each line of business in the principal cities east of the Rocky mountains average only about ten per cent less than in April, 1892, the year of largest business hitherto, and six per cent more than in the same month last year.

So it will be seen that if we look a little beyond the market for corn and oats we will see that the tide of prosperity is set our way, and that there is no necessity for whining.

There is one thing all farmers should keep in mind, and that is that pay-day is positively certain to come along. If he buys anything on credit, it will have to be paid for. Many men shut their eyes to the future, and buy anyway, and trust to "luck" for the cash wherewith to settle. Such men are constantly in trouble. A short time ago one of our grocery-stores adopted the cash system. The cash had to be paid down for everything that went out of the store. Customers who had dealt there for years went to other stores, while people who had been paying cash at other stores for years changed to this to get the benefit of the lower prices, the cash store having reduced prices on all classes of goods ten to twenty per cent.

It was an eye-opener to note who forsook the cash store and lower prices and went where they could get credit, and also who forsook the others and began doing business with the cash store. Not all those who are generally supposed to be "well fixed" traded with the cash store, nor did all of those who are struggling to make a living seek credit. Those who pay as they go and object to paying a profit large enough to cover other people's debts are the cash men.

The farmer who pays as he goes is not complaining about hard times. He has to deny himself some things he would like to have, but no debts are harassing him. He is vastly better off than the machinist or factory hand whose entire income is cut off by an adverse turn in the market, and who is then likely to find himself without the means wherewith to buy a single meal.

If I am not badly mistaken, all signs indicate a return of better times. We have been adjusting our affairs to meet the changed condition of things. The railway-building boom came to an end some years ago. There will never be another like it in this country. The best lands in the West are occupied by settlers. There will be no more "westward ho!" no more great expansion of bonanza agriculture. Let us keep our senses, encourage those who feel downcast, buy and sell to the best advantage, and pay as we go, and we will soon become the most prosperous people on earth.

FRED GRUNDY.

ILLINOIS BUTTERINE LAW.

June 14th Governor Tanner signed the butterine bill passed by the late legislature of Illinois. In substance this law prohibits the coloring of oleomargarine and butterine. Its effect is to put these substitutes for butter on the markets of Illinois in their own color. They cannot be made to look like butter. The enactment of this law against the fraudulent sale of butter imitations is a triumph for Illinois dairymen.

Our Farm.

FARM THEORY AND PRACTICE.

CLEAN WHEAT.—There is no excuse for the presence of rye, cockle or chess in wheat at harvest-time. It is not always possible to have absolutely clean seed, and weed-seeds are in the soil, but it is practicable to clean the standing grain when these weed pests appear. Rye shoots up much higher than the wheat, and cockle has a blossom easily seen. Taking two drill widths at a through, a man can pass over an acre of wheat very quickly, clipping off the heads or blossoms of these undesirable plants. We have too much thoroughbred cockle in the country. The fanning-mills take out the lighter and smaller grains of cockle, but too often leave the largest grains in the seed. In this way we have been raising the standard for cockle until some of it is as heavy as wheat-grains. It, together with rye and other filth in wheat, can be wholly eradicated by a little care before wheat harvest. Lowlands often have some docks in the wheat, and seed is ripened before harvest. Getting into the manure, they are carried back to cultivated fields. A watch should be kept for these, and an ounce of prevention saves the cost of a pound of cure.

CLEANING MEADOWS.—A weedy meadow is a nuisance, and such abound this wet season. It is a good rule that a meadow is worth cleaning of weeds if it is worth letting stand for hay. It is a matter of surprise to me that the practice of cutting filth out of meadows before hay harvest is not more general, especially when the hay is wanted for market. One cannot afford to put foul hay upon the market for what it will bring, nor can he well afford to let weeds choke out hay that is wanted for home use. The right implement for cleaning grass is a sharp scythe, and the right time is before the grass heads out. Whitetop is the worst weed with which we have to contend, and yet it is easily mastered. When let alone it makes a rank growth, but if cut a few inches from the ground while young and full of sap, it can hardly be seen in the hay. In good grass that has some filth in it the time of a man with a sharp scythe is worth five to ten dollars a day. It cost me four dollars' worth of time this year to clean fifteen acres of grass that would readily sell for twenty-five dollars more than it would have brought without cleaning. The hay looks better, is better, and there is more of it.

FARM ROADS.—The load of wheat or hay that can be drawn to the barn is measured by the worst place in the farm road leading to the barn. This may seem a small matter, but it is not so on thousands of farms. I cannot afford to have a bad place in the road, because time and wages of men are going on while the team is stalled or taking only three fourths of a load to escape stalling. A day's work of man and team, filling gullies and chuck-holes, and doing a little grading of steep bluffs, would be worth twenty dollars on a few farms with which I am acquainted. It would save wear of wagon, team and driver's temper, and make it possible to increase the size of loads without danger of overloading. This work should be done thoroughly and on time. I prefer having it done a month before harvest, so that some wear may make it smooth. These are "details," but details count. A man will spend half a dollar to go to a circus and be happy two hours, while that half a dollar expended in permanently getting rid of some nuisance would save him from being mad a month, if all the little vexatious times could be shoved together and be thus measured.

REPAIRS FOR MACHINERY.—When a machine is bought its number and correct name should be written down in a memorandum-book, so that they may be known when grease and dirt or new paint have obliterated them on the machine. Then, when ordering repairs, the name and number should always be given. Manufacturers are always making some changes, and parts made for machines of one year may not fit machines of the next year's make. This is especially true of comparatively new models of harvesting-machinery. If the number of the machine and number of the needed part are given, there

should be no danger of misfits, though even then I am not always able to get what is ordered. It is my experience that it is unwise to buy any new machine of a transient agent on account of the difficulty of getting repairs. It is better to have farm implements of such "makes" as are in common use in the country, as then repairs are kept on hand by a dealer near at hand. The importance of this point will be recognized by those who have been compelled to hunt up manufacturers when ordering the simplest supplies for a machine.

WHERE PLANTAIN ABOUNDS.—I observe many clover-fields badly infested with plantain. The hay crop is fairly good, but the seed crop will be worthless, and if the plantain is allowed to stand until winter, its seed will make the ground filthy for years. Often the clover sod is wanted for a spring crop, and it is not easy to see how the plantain may be prevented from seeding. Mowing does very little good, the plants forming seed near the ground late in the season, regardless of continued clipping. Having one such field this year, a legacy of some neglect years ago, my plan is to turn the sod before the plantain ripens seed, and then sow rye. This means some extra expense, but I believe that part of it will be made good by increase in yield of next year's crop. The rye will add a lot of vegetable matter for turning under next spring, the second plowing will place the rotted clover-roots back near the surface, where they will do the most good, and thus the whole cost of the one breaking is not chargeable to the plantain. Even if it were, I should break the ground and seed to the rye, as the plantain must be killed out for the sake of cleaner clover in the future. The prevalence of this weed-seed in the clover-seed upon the market indicates its wide distribution over the country, and its resultant harmfulness.

DAVID.

SUGAR-BEETS.

The farmers of Utah cultivate over three thousand acres of sugar-beets every year. This acreage yields between 40,000 and 50,000 tons of beets, which are made into sugar. The one sugar-factory produces 5,250,000 pounds annually, all of which finds a market within the state. This factory furnishes employment for more than one thousand men, women and children, engaged in growing and harvesting the beets and manufacturing the sugar. In addition to the labor employed directly in beet culture and sugar manufacture, not less than five thousand tons of coal and two thousand tons of lime-rock are required. Sugar-bags and their manufacture, together with many smaller necessities, add the number of laborers employed, directly and indirectly, to almost three thousand people. As the consumption of sugar in Utah averages almost one hundred pounds a head, there is room in this state for a half dozen such factories as the one in operation in order to supply the local demand.

Sugar-beet culture has increased the demand for small farms, and made the practice of intensive farming more popular and profitable. An acre of good soil, well cultivated and properly irrigated, will easily yield twenty-five tons of marketable beets, but many inexperienced farmers harvest less than fifteen tons to the acre. The prices obtained run from \$3.50 to \$4.50 a ton, according to the amount of saccharine matter contained in the respective lots. Good beets contain from twelve to fifteen per cent of sugar substance. The long leaves collect a substance known as hydrocarbon from the heat and moisture of the atmosphere. This is transferred to the roots, and upon the amount of such secretion depends the value of the beets. The climate, soil and cultivation determine whether or not any particular section is adapted to growing sugar-beets, while a good-sized factory must be the market.

The typical sugar-beet weighs about one pound or more. An average weight of a little less than a pound is considered the best beet in European countries. The tuber is a long, white root resembling the parsnip. It grows to a depth of several inches, and sends out small rootlets or fibers in search of food and moisture. A car-load of sugar-beets, side-tracked at Lehi, the factory town, is quite a curiosity to eastern tourists, who always take a few for Mormon souvenirs. The beet is a strong drought-resisting plant, and will grow to great depths in good soil during dry seasons. There are six distinct

varieties, all of which are good for feeding purposes and add much to the product of the dairy. Any soil that will produce other root crops is good for the sugar-beet, but as a general rule the better the soil, the more productive are all crops.

Most of the sugar-beet seed planted in Utah is imported every year from Germany or France, and furnished the farmers by the sugar company. The seed is planted as early as possible in the spring, in drills, with the furrows about twenty inches apart. When the plants appear above the ground cultivation begins with small weeding-plows. Irrigation is not commenced until the plants are seven weeks old. The water is generally applied by the furrow system three or four times during a season. When the plants are of sufficient height hand-weeding is necessary. In this operation the weeder uses a small crooked instrument much like a corn-husker, and gets down on his knees as in weeding onions. The plants are thinned about three inches apart and cultivated as the garden-beet or other crops. No weeds are permitted to grow and seed in the beet-field.

After the sugar-producing juices are extracted from the beets the pulp is a most valuable stock food. The Utah sugar-factory supplies the pulp of over forty thousand tons of beets for feeding an immense herd of stock. The farmers in the vicinity of the factory purchase many tons of this refuse, and use it in fattening hogs. An extensive silo system is carried on at the factory, and the pulp is dumped from cars into the vats on either side of the switch extending to the feeding-pens. The pulp is added to regular rations of hay and grain, and constitutes a perfect fattening food. The fertilizing qualities of sugar-beet pulp add materially to its value. Many fields are enriched by a heavy coating of pulp, and the production of some crops is increased by plowing under the pith of the beet. A low grade of molasses and a fair quality of vinegar are also some of the productions of the sugar-beet.

JOEL SHOMAKER.

THE PATIENT COW.

Much has been written about the horse, his treatment and training and the cruelty practised upon him—and not a word too much—but of the cow not so much has appeared in print, for various reasons, one of which is that the cow in some respects is inferior to the horse. Certainly the cow is inferior to the horse in intelligence, yet it is hardly fair to compare her with the horse, as the two animals were created for purposes widely different.

Occasionally, however, the cow exhibits extraordinary intelligence. A farmer sold a cow with many wrinkles on her horns to a neighbor whose pasture adjoined. Some time after the sale the farmer who sold the cow, working in the field with his men, saw the old cow in the neighbor's pasture hooking down a section of fence, and after she had succeeded she entered the pasture where she had spent several years of her life, walked straight to a spring, drank her fill, and then returned immediately to the pasture she had left through the opening she had made. Water was scarce in the new pasture, and she "knew" that in the old pasture was a good spring.

It was not remarkable that the cow should break the fence to go to the spring, but it was remarkable that she went straight back to the pasture in which she belonged. Instinct or thirst might lead her to water, but what led her back?

Many persons appear to think that the cow is a nerveless, insensible creature that can endure hunger and cold until it is convenient to relieve her.

Again, many persons appear to believe that the cow does not require any exercise (what they call exercise), because she does not take exercise when she has opportunity, and therefore she may be tied to the stanchion from September to May. There may be excuse for this on the part of persons who are destitute of sense, for the cow does take little exercise, or what some are pleased to call exercise. The cow walks slowly to pasture, grazes awhile, short or long, according to the abundance of the feed, and then lies down as though tired, and chews the cud; and is up again and then down, through the day. There is not much exercise in that, but it is enough and of the right kind to suit the cow (and her owner), and make her what she is intended to be—a milk making or producing animal.

A sedate man went to board in the country. The landlord asked him if he should take exercise, and he replied:

"Certainly; every day."

The guest wondered why he was asked this question, but he found out later. About a week afterward the landlord remarked:

"I thought you said that you should take exercise every day. When are you going to begin?"

"Begin?" replied the guest. "Why, I've begun already! I walk five or six miles every day."

"Humph!" exclaimed the landlord, "call that exercise?"

"Yes. What do you call exercise?" asked the guest.

"Why, run ten or twelve miles out and back every day, throw clubs, play tennis, and, for example, place your hand on the top rail of that gate out there and vault back and forth as long as you can without stopping."

The laughable part of this was that the landlord, supposing that his guest would run and jump and thus demand more food, had charged him accordingly; but being honorable, he reduced the price when he learned what kind of exercise his guest wanted.

Any one having this idea of "exercise," and applying it to the cow, may imagine that the cow needs none. The cow stands (in many barns) from fall until spring, and the bull (no wonder he is dangerous) may stand the year round, and the farmer does not see any wrong in it; but if his horses remain in the stable a week he must take them out for exercise. Exercise of the right kind is as necessary for the cow as for the horse.

Owing to apparent sluggish nature of the cow she has been abused and tortured beyond the power of tongue to tell. It is an extraordinary fact that men sixty and seventy years of age, who have spent their lives on farms with cows, do not know how to aid a cow to drop her calf, and the tortures inflicted at this critical time are too horrible to repeat; and these were humane men, too, men who would quarrel with a man for whipping a horse, but their ignorance and their lack of appreciation of the nature of the animal led them to inflict terrible cruelty.

At one of the large cattle markets of the country, held every week, a kind of cruelty is practised that has attracted the attention of every humane man who has visited the market. As the visitor approaches the market he hears the hellowing of cattle. Now, a cow does not hellow without cause, and the least cause, perhaps, is loneliness. If a cow from a herd is shut up or turned into a pasture by herself, she will bellow; when her calf is taken away she bellows, and she bellows when she is hungry or thirsty. One of our cows in June came to the bars and bellowed about four o'clock in the afternoon, and some one must go and milk her. The udder was so full that it ached, and she called for relief.

At the market referred to the bellow of cattle may proceed from various causes, but it is caused chiefly by aching udders. Men (traders and farmers) go to the market to buy cattle by the car-load or to buy single animals, and the buyer's wife may go with him, for the wife may be interested in the color of the cow or her natural beauty generally. Now, to sell a cow to advantage it is necessary to show the buyer a large and prominent udder. Therefore, the cows intended for this market are not milked for one, two, three or four days, according to the secretion, before the day of holding the market, for the express purpose of distending the udder that they may appear to be great milkers. And there the cows stand with aching bags and bellow until the market is over or they are sold. This goes on every week, year after year. It is a terrible torture inflicted upon an innocent animal for the purpose of gain. There is law enough to stop it, but it is not stopped.

Let all remember who have to do with cows that the cow is not a cold-blooded automaton, insensible to heat, cold or hunger, and that she can feel the prick of a pin as keenly as the most spirited horse. And if at calving-time there is any interference with nature, do nothing if you do not know what to do, and call some one who does. If our agricultural colleges are turning out farmers (about which there appears to be some doubt), veterinary science as applied to the cow should be a more prominent department than it is now.

GEORGE APPLETON.

Our Farm.

NOTES FROM GARDEN AND FIELD.

THE BEAN AND PEA WEEVIL.—Several of our readers again ask about these insects and what to do for them. What I do in the first place is to plant no seed peas or beans that have live weevils in them. If we do, we will surely have buggy peas and beans again. The weevil, either in the larva state or as a mature insect, winters over in the stored seed, and comes out in the spring or when the conditions are favorable. Then when the peas or beans are in bloom, the old female deposits her eggs in the blossom or the young pod. When the old bugs were very plentiful on peas in bloom, I have sometimes tried to kill them by spraying with buhach-water; that is, water into which a small quantity of buhach, or California insect-powder, has been stirred. On several occasions I have thought that this helped matters somewhat. But if the old weevils are on the place or on a neighbor's place, I think we are pretty sure to find more or less wormy peas or beans. I know of no sure plan to prevent the old bugs from depositing their eggs on these plants, except that we kill them before we plant the seed, and while yet inside of the pea or bean. The bisulphid of carbon treatment will do that, as often stated, and the sooner that the seed after being harvested is subjected to this treatment, the less damage will be done by the larva inside the seed to the seed's vitality and germinating power, and the less damage we will have to fear from the weevil in future. I am sure we have little reason to find fault with our seedsmen. At least I cannot remember a single instance that I have received weevil-eaten seed peas or beans from any of the seedsmen that I have dealt with during the last four or five years. The trouble is usually with our home-grown peas, and sometimes beans. In many instances we store up for next season's use a lot of home-grown, freshly gathered peas or beans that show no exterior signs of bugs, and yet when we open the bags or sacks next spring, especially if they have been kept in a rather warm place for a time, a whole swarm of full-grown weevils may greet us, to our dismay. The best thing to do then is to put a small quantity of strong insect-powder (such as buhach) into each bag or sack, and shake it among the peas. This will kill the weevils, and if the peas or beans are not too badly eaten already, they may be used for seed. We might also kill the bugs by immersing the peas or beans for a few moments into hot water or exposing them for a longer time to a temperature of about 140 degrees Fahrenheit. The bean-weevil will sometimes breed in stored beans, and on opening a package of seed-beans that had been kept over, unopened, until the second year, I have repeatedly found live bugs, and the beans all eaten up so that little else remained but dust.

SEEDLESS MELONS.—The great objection that I have to watermelons is the way that the seeds are distributed all through the flesh. For this reason I am very fond of the seedless one, and care very little about the other part. If we could get an entirely seedless watermelon, it would be quite an acquisition, at least in my estimation. Rose Seelye Miller holds out a very tempting suggestion (in New York "Tribune") as follows: "Plant the seed as usual. When the vines have grown to a length of some three or four feet, cover the stalk at the third or fourth leaf, and keep it covered, and in time it will take root. At the end of two or three weeks this will be accomplished, and the new plant should then be severed from the parent stalk. This new plant will, or should, produce seedless fruit or vegetables, as the case may be. Think of having a seedless watermelon, the transparent, juicy pulp with no seeds to hinder your enjoyment! Think of having a muskmelon sweet and luscious to its center! Is not this worth trying for, worth a little experimenting? I think so. Possibly some varieties will respond more readily than others, but it will be little trouble to try and see what may be done."

What a tempting prospect, indeed! Yet, dear Rose, it is a delusion and a snare. Why should a layer plant or a cutting produce fruit materially different from the

parent plant? Whether it should or not, however, experience shows that it will not. The squash grown on a layered branch, when all connection with the ground by means of the original stalk and root was entirely cut off by squash-borers, was as full of seeds as the other that grew on another vine with natural root. Will the fruit of a gooseberry branchlet layered and rooted at the tip, and then cut off from the old bush, stand up instead of hanging down? Not much. Or will it be seedless? Surely not.

From what I have said here it should not be inferred that I consider it impossible to get a seedless melon. We have a number of seedless fruits. The banana has no seed. The pepino (a very interesting plant which I grew and fruited with some success in New Jersey, as reported in these columns at the time, I think) is seedless. We have seedless pears, etc. The tomatoes which I grow in the greenhouse during the winter are almost invariably without seed, solid all the way through, but small. The English frame cucumbers are usually seedless. Why should we not succeed in securing a seedless melon after awhile also?

The seedless tomato is the result of failure in pollination. So is the seedless cucumber; and if we want a seedless melon we must find means to have the fruit "set" without the interference of pollen, which would result in seed production. It can only be the virgin melon which grows without seed. The trouble is that the young melon or squash, when not brought in contact with the male element, usually refuses to grow. It simply shrivels up and drops off. How can we make it stay on and grow? I do not know.

GROWING PICKLING ONIONS.—"In the production of pickling onions about twenty-five or thirty pounds of seed to the acre should be sown. No variety is better adapted to this purpose than the Barletta. The bulbs when harvested should be as uniform in size as possible. Onions measuring from three fourths of an inch to one and one half inches in diameter are the proper size for this purpose." I quote this from a recent bulletin (Farmers' Bulletin No. 39) issued by the United States Department of Agriculture on the subject of "Onion Culture." As I have stated in these columns, the Barletta onion is one of my most satisfactory and most profitable crops. I have quite a patch of them this year. But I find that for best results I must sow at the rate of fifty to sixty pounds of seed to the acre. This onion grows quickly, but never very large. Now and then I have specimens measuring nearly two inches across; but my customers call for the smaller sizes, preferring the very smallest, and willingly paying a much bigger price for them than for the larger ones. The same bulletin also says that "the Barletta variety may be sown for early use." True, it is early. But I have never found it to be fit for anything except pickling. It is too small. I think I would prefer the New Queen, which is but little later, and considerably larger, although well adapted for a pickling onion also.

T. GREINER.

WESTERN NEW YORK FRUIT NOTES.

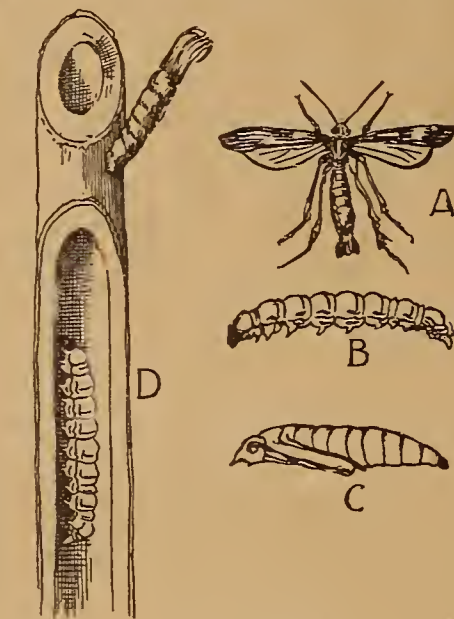
In making preparations to plant several hundred pear-trees recently, a farmer friend argued the "unprofitable side" of the matter. He thinks when the trees now planted come into bearing prices will be down, and there will surely be no money in it, as there scarcely is at present, in his opinion. The arguments have made no serious impression upon me, as the planting goes forward. The trouble with most of these parties who see "no money in it" is that they do not go about it in the right way. You will see them "stick" in a few pear-trees here and there about the buildings, where they scarcely have any cultivation; then if they bear, at best the fruit will not be first-class, and they will not secure the top price. Their product goes begging in the market. I prepare the ground by thorough cultivation and heavy manuring, and putting in a row of drain-tile between every other row of trees, being sure that I have the right kind of soil to start with. I keep up the cultivation and manuring. The older the trees, the heavier the manuring—not a light coat of it, but three or four

times as much as farmers usually apply—the more the better, and it is in this extra manuring and cultivation that the extra profit lies.

I have in mind a party who has about two acres of Bartlett pears in full bearing, and under such care they seldom fail of a good crop. I think he sells on an average not less than \$1,200 worth of pears from these two acres. Instead of hunting a market for his pears, buyers engage his whole crop, because the fruit is larger and handsomer than that grown in a haphazard way.

In locating several years ago on a farm partly planted to fruit, I was aggravated by some mistakes in planting which the former proprietor made, and some of which I am reminded of constantly. The one is that the trees are planted in such fearfully crooked rows. This should not be. It is hard to work among them without skinning the trees with the harrow, and another thing is the ignorance or poor judgment in planting the different kinds and varieties. There are the vigorous, upright-growing Niagara plums, now good-sized trees, with here and there a Lombard or Damsou, which are slow growers, and will never attain near the size of the Niagaras.

Besides the symmetry of an even growth, it is more convenient to have each variety by itself, and avoid the necessity of moving about from place to place in picking. Besides, the poorer growers are



CURRENT-BORER.

A, winged moth; B, grown caterpillar; C, pupa; D, stem split open to show caterpillar inside and an empty pupa-skin above.

rather at a disadvantage in growth at the side of the stronger growers, and will never do so well as they would if planted by themselves.

Another mistake made too often is worthy of more than a passing notice. It is in planting the common "wild" sour cherry. There can be no possible excuse for this, except the first cost of the trees, or the fact that the "sprouts" can usually be dug up in a fence-corner and planted, while nursery-grown trees of some better variety are not at hand when wanted.

At the present low prices of trees this first cost is not much of a consideration, and there are such decided advantages in planting better varieties that I would rather plant them even if the trees were to cost me a dollar apiece. These wild sour cherries have a propensity for sprouting from the root that it is almost impossible to keep them down when once they are started. Then they are so subject to black-knot that it takes a constant watch to keep that in check. The fruit of Early Richmond is larger, earlier and of better quality, and the trees earlier and better bearers and the fruit easier to pick, and they never sprout from the root. Then the Montmorency for a later cherry just fills the bill. With these excellent cherries we have no use for the "wild" ones.

C. WECKESSER.

ORCHARD AND SMALL FRUITS.

CONDUCTED BY SAMUEL B. GREEN.

Gooseberry-mildew.—W. F. D. L., Reno City, Nevada. The mold on your English gooseberries is caused by a surface-feeding mold that attacks them very generally in this country. I have failed to grow them successfully on this account without more trouble and expense for spraying than I like to put on them, but they can be grown by selecting a good location, and spraying the

foliage at fruit at least once in two weeks with sulphid of potash (liver of sulphur), at the rate of one ounce to two gallons of water. Liver of sulphur costs about twenty-five cents a pound. I think that Industry and Whitesmith are freest of English varieties, from this trouble; but all gooseberries are liable to injury from it some seasons, and even native sorts are often greatly improved by being sprayed with this material.

Pear and Apple Blight.—I. S., Bushnell, Mo. The Idaho pear probably is reasonably free from blight, but it is a new variety, and has not been sufficiently tested for any general statement regarding its powers to resist disease, but it is very vigorous. While we hear more or less about blight-proof pears, yet I do not know of any variety that is really blight-proof. Pears and apples probably blight most in wet summer weather, because they are growing most rapidly at that time, and the tissue is more loose and open than when they are growing slowly. Then, too, a moist, warm atmosphere is more favorable to the growth of the parasite that causes the disease than dry weather.

Curly-leaf.—B. A. G., Swan Creek, Ill. Your peach-trees are infested with what is known as curly-leaf (Taphrina deformans), which is closely allied to the disease that causes plum bladders, or pockets, in plums. The full life history of this parasite is not known, but it probably lives over winter in the twigs of the tree. The remedy is to remove and burn the infested branches, cutting a foot below where the disease appears. In your section the disease will probably have run its course by the middle of June, and then the tree will begin to send out new shoots below where it has been injured.

Curran-borer.—W. W., Sheboygan, Wis. Your currants are infested by the curran-borer, which is very abundant in your section. The borers are the larvae of a wasp-like moth, which lays its eggs in early summer on the caues. These soon hatch, and the larvae eat their way to the pith, where they remain until the following season.

REMEDY:—On account of this borer wintering over in the stems, it may be destroyed by cutting out and burning the infested stems in winter or early spring. A little practice will enable one to detect the infested caues at a glance, and their removal will not generally require more pruning than the currants really need.

Plant-lice.—J. H. M., Bowling Green, O. Your currant-leaves are infested with the common currant-lice, and the plums with the plum-lice. The remedy is tobacco-water the color of strong tea, or kerosene emulsion, as often recommended in FARM AND FIRESIDE. If not very abundant, hand-picking of the leaves is the best remedy. The trouble about killing them is that the lice are almost entirely on the under side of the leaves, and so protected that they are difficult to reach with spray. They seldom do very serious injury.

Ash-tree Borer.—J. V. S., Hot Springs, S. D. Your ash-trees are infested with the ash-tree borer, which in the mature state resembles a wasp. There is no remedy, and planters in your section should go slow about planting the ash on account of its being a doomed tree wherever it is planted in large quantities for shade or ornament. Better commence to replace your ash-trees with box-elder or white elm or white willow, so they can be coming on while the ash is dying out.

Spur-blight.—W. W., Loreda, Mo. Your apple-trees are affected with what is often called fruit-spur blight. This is occasionally abundant, and causes much damage. It is probably a form of the common "fire-blight," which, as has been often stated in FARM AND FIRESIDE, is caused by a minute vegetable parasite that lives in the tissues of the tree. There is no known remedy, and the best treatment consists in cutting off and burning the affected portions.

Worms in Ground-cherries.—W. A. W., Silver City, Iowa. It was probably a tortrix that infested your ground-cherries. A similar species is this year abundant in the twigs of roses and box-elder. The only remedy consists in destroying the infested fruit. However, this insect is seldom very injurious more than one season before its parasites become so numerous to nearly kill it out, and the chances are that you will not be greatly troubled with it this year.

Galls on Grape-vines.—J. P. S., Ironton, Ohio. The small gall clusters on your grape-vines were caused by a small gall-fly that somewhat resembles a mosquito. It is not new, although not met frequently, and it probably has never done any serious damage. The galls form around the eggs which are laid in the leaf.

Weak Tired Nervous Thousands are in this condition.

They are despondent and gloomy, cannot sleep, have no appetite, no energy, no ambition. Hood's Sarsaparilla soon brings helps to such people. It gives them pure, rich blood, cures nervousness, creates an appetite, tones and strengthens the stomach and imparts new life and increased vigor to all the organs of the body.

Hood's Sarsaparilla

Is the Best—In fact the One True Blood Purifier. Sold by all druggists. \$1; six for \$5.

Hood's Pills cure Liver Ills; easy to take, easy to operate. 25c.

Our Farm.

THE IMPORTANCE OF WATER IN CROP GROWTH.

WATER is the most important factor in crop growth. Practical farmers are coming to realize the fact more and more. Evidence of the increasing knowledge along this line is shown by the widespread interest that is being taken in irrigation, not only over the arid regions of the West, but also in the humid climate of our own and neighboring states. More attention has also been given to improved methods of plowing and cultivation with a view to retaining moisture in the soil.

Growing plants contain a very large proportion of water, hence when dried they lose considerably in weight. The average number of pounds of water in a ton of green substance for each of the following crops is as follows:

Timothy	1,500 pounds
Red clover	1,400 pounds
Corn fodder	1,500 pounds
Meadow-grass	1,300 pounds
Melons	1,800 pounds
Turnips	1,800 pounds

When we market a ton of turnips we are selling 1,800 pounds of water and 200 pounds of turnips. It pays to sell green crops.

Dry fodder does not contain nearly so much water.

One ton of timothy hay.....	260 lbs of water
One ton of corn fodder.....	800 lbs of water
One ton of wheat-straw.....	180 lbs of water
One ton of oat-straw.....	180 lbs of water

It is impossible at ordinary temperature to dry out all the water held by plants. This can be removed only by exposure at high temperatures.

All of our agricultural plants obtain their water exclusively through the roots. Leaves and stems do not absorb water to any appreciable extent. A well-developed root system is of great importance to plants. Roots are the plants' water-pumps.

On the other hand, there may be too much moisture in the soil. The plant depends largely for its ability to do work on four factors—heat, light, food and water. If these are furnished in the right amounts at the right time the greatest growth occurs; if, however, all or any one of these factors are deficient or in excess, growth is checked. Too much water in the soil fills the air spaces, or openings, between the soil grains, and drives out the air. When this occurs, roots of our crops cannot obtain air and are drowned, just as we would be if we were placed under water. If the soil is three fourths saturated it is not well adapted to crop growth. Most plants do best when the water in the soil is from forty to sixty per cent of water-holding capacity. Wheat, for example, is found to do best in a soil containing about fifteen pounds of water for each one hundred pounds of the wet soil.

Plants take water from the soil by means of minute root hairs which branch out from the main roots, and thread their way through the soil, pushing around and between soil grains in all directions. Water taken up by the roots passes upward into the stem and foliage of the plant. It will be remembered that the mineral food and nitrogen of plants are taken from the soil, and these can be taken only through the medium of water. The water as it is absorbed by roots is not pure, but contains in solution small quantities of all the soluble soil compounds. Some of these compounds are absolutely essential to the growth of plants. A soil may contain abundance of plant-food, but if there is not enough moisture present to dissolve this food and carry it into the plant tissues, the soil is a barren waste. This is precisely the condition over much of the drought-stricken area of the West. The barrenness of the soil is not due to scarcity of plant-food. Plant-food is present in abundance, but there is not enough moisture present to dissolve it and carry it to the plant roots. Crops in this soil are in the same condition as the sailor in mid-ocean, who, in his distress, cried, "Water! water! all around, but not one drop to drink." Crops in the arid region have food! food! all around, but not one bite to eat.

How much water does a crop use? How many pounds of water does a crop take from the soil? King, who has made extensive experiments in this line, finds that for each pound of dry matter the following

amounts of water are lost by evaporation from plants and soil:

Dent-corn used 309.8 lbs. or 2.64 inches, of rainfall to the acre for one ton of dry crop.
Flint-corn used 233.9 lbs. or 2.14 inches, of rainfall to the acre for one ton of dry crop.
Red clover used 452.8 lbs. or 4.03 inches, of rainfall to the acre for one ton of dry crop.
Oats used 522.4 lbs. or 4.76 inches, of rainfall to the acre for one ton of dry crop.

Corn has been known to increase, says Hunt, at the rate of 1,300 pounds of dry matter an acre a week. This would require the evaporation of 200 tons of water. Weeds growing on the same land would also pump water out of the soil, and rob the corn to the extent of their evaporation.

"At the Illinois experiment station eighteen plots grew the same varieties of corn in 1887 and in 1888. Both seasons the seed, the preparation of the seed-bed, the planting and the cultivation were as near alike as human ingenuity could devise. The first season the yield was thirty-two bushels an acre; the second season the yield was ninety-four bushels an acre. The rainfall during the five growing months in 1887 was 13.4 inches, while in 1888 it was 23.0 inches."

The fact that growing crops take large amounts of water from the soil was shown in an experiment with rye on the Ohio State University farm in the season of 1895. A field of uniform fertility was selected. Rye was grown on a portion of this field, while the other portion remained fallow. Several days before the rye was harvested the fallow portion was plowed and prepared for corn. After the rye was removed that portion of the field was plowed and prepared for corn, then the whole field was planted. At harvest-time a great difference was observed between the corn on the rye ground and on the fallow ground. The stalks of corn on the rye ground were smaller and at least one third shorter than the others. The yield of ear-corn for ten shocks, each ten hills square, on the rye ground was 690 pounds, while ten shocks of the same size on the other portion of the field yielded 2,125 pounds, or more than three times as much. The rye ground yielded 1,000 pounds of straw, while the other ground yielded 2,435 pounds, or more than twice as much. To what shall we attribute this great difference in yield? Can it be possible that the rye crop exhausted the soil so that it could not grow a fair crop of corn? I think we agree that this could not be the reason. Let us see how much water was taken from the soil by the growing rye. There were harvested from fifteen acres thirty-three tons of green rye, or six and one half tons of dry matter. As it requires four hundred pounds of water to produce one pound of dry matter we see that 352,000 pounds of water, or 1,200 barrels, were taken from each acre of ground during the growth of the crop. While we cannot say certainly that the lessened yield on the rye ground was due to scarcity of water, we know that all the facts at hand indicate this to be the case.

Last May I determined the amount of moisture in the surface foot of soil on rye ground and on adjoining fallow ground. The soil which had produced the rye crop contained 18.5 per cent of water, while the adjoining fallow ground contained 23.2 per cent of water, showing that the growing rye pumped out 4.7 per cent of

being true, those soils which will catch and retain the largest quantities of moisture in a condition which shall allow crops to make the best use of it are the most productive. The relation of soils to moisture is an important factor in determining land values.

In a dry time or in places where droughts occur during parts of the year we should carefully guard the supply of moisture in our soils to prevent waste either by excessive evaporation or from flowing off over the surface or by percolation through the soil beyond the reach of roots.

How may we control moisture? Can we save soil moisture by practical methods of cultivation? When water falls upon the soil a portion of it runs off over the surface, another portion is absorbed. The water which enters the soil may pass on through and find its way into streams, or it may be evaporated into the air. As farmers we want our soil to catch and retain the greatest possible amount of the rainfall. Cultivated soil is loose, and will catch and hold more water than a compact soil. It acts as a sponge. This is another reason why cultivation saves moisture. A layer of straw spread over the soil would prevent its drying out. In this same way a layer of loose, cultivated soil need not be deep. Two inches is sufficient. In fact, if we cultivate deeper than that we seriously injure corn roots and lessen yield. How frequently should we cultivate? Often enough to keep weeds down and prevent the soil from baking.

Fall plowing retains moisture. The rough plowed ground collects and absorbs the winter snow and rain, and holds it for the summer crop.

Early spring plowing saves moisture. If land is allowed to remain unplowed it loses water rapidly. King, of Wisconsin, found that corn ground lost at the rate of 9.13 pounds of water a cubic foot a week more than adjacent plowed ground. We have all noticed the difference between the loose, moist, friable condition of the soil early in the spring, and the hard, dry, cloddy condition later. Early plowing may mean an extra disking or cultivation before the crop is planted, but this cost is insignificant compared with the gain in amount of moisture saved. Of course, in a wet season the saving of moisture is not so important.

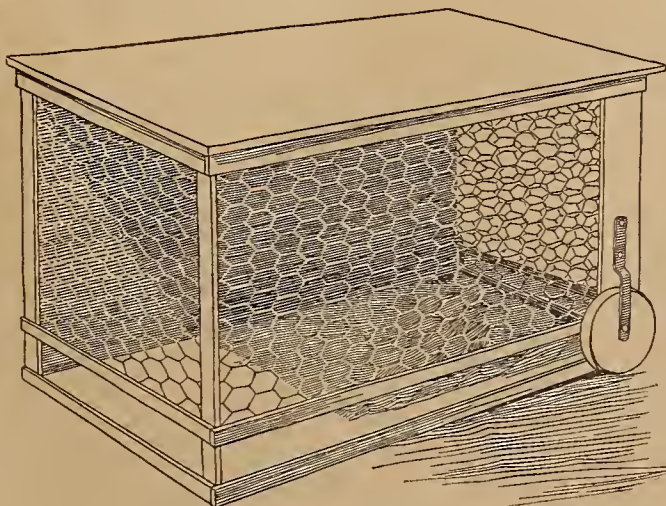
Rolling the soil dries it, as a whole, but brings moisture from the deeper layers near to the surface.

The dry seasons of the past few years emphasize the importance of improved methods of cultivation with a view to saving soil moisture. The farmers of the far West are deeply interested in this question. Railroad companies are establishing experiment farms in western Kansas and Nebraska for the purpose of educating the farmers into methods of culture whereby the most economic use can be made of the scanty rainfall of the region. Their ultimate aim is financial gain from increased freight and passenger traffic.

W. D. GIBBS.

HOW TO BREAK UP SITTING HENS.

What poultry-keeper is not more or less pestered at this time of the year with broody hens? I think as long as we keep fowls we will have some trouble in this line, and if we cannot make profitable use of biddy's broodiness in each and every case, then we must devise some simple plan by which we may turn her mind, and at least her energies, again to more profitable business. I have kept so-called non-sitters, but I had the same trouble nevertheless. For a number of years I have used a light, portable cage, 3x5 feet, 2½ feet high, illustrated by accompanying drawing. Into this were placed all broody



hens—not more than six at a time—and kept there for a few days. Five or six days would generally suffice to induce them to give up their notion. The cage is covered on three sides with netting. It is also provided with a roosting-pole, left out in the drawing. The three or four inch space between the two bottom slats is not covered with any netting, but through it the confined fowls may reach water and food placed outside.

As shown, one side of the cage is boarded up tight with thin lumber, to provide for protection against wind, rain and sun.

Now, every day this cage, with its occupants, should be moved a few steps to a new grass spot. To facilitate the work, two easily sawed out plank wheels may be bolted on close up to the corners at one end, thus the moving will be an easy task—sort of wheelbarrow fashion.

I find another use for such a cage when not in use for the above-described purpose. Little chicks can readily slip through between the two bottom slats. Thus the cage furnishes a feeding spot where the little things cannot be molested and robbed by grown fowls. This may sometimes be found an advantage.

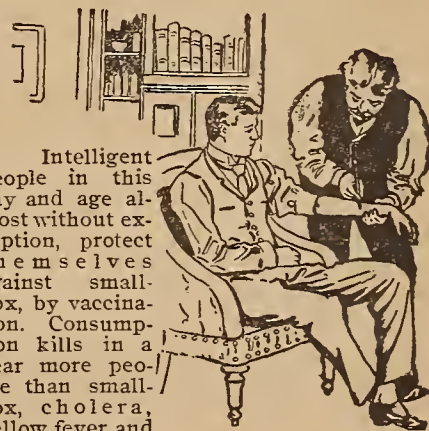
F. GREINER.

EXTRACTS FROM CORRESPONDENCE.

FROM KANSAS.—Osage county has several large streams crossing it. Its general surface is rolling, but it has high bluffs and beautiful rounded knolls. It has a large amount of native timber for lumber and fuel; it also ships fine walnut logs to Europe for veneering. It has an inexhaustible vein of coal, entering the northeast corner of the county and running out at the southwest corner. At the shafts in towns coal can be bought for eight cents a bushel of eighty pounds; at shafts and strippings in the country for from four to eight cents a bushel. Railroad facilities are excellent. If a man wishes to ship cattle to Kansas City, a car will cost him from \$18 to \$22, owing to size. Building stone is plentiful. Springs are quite numerous, including a few mineral springs. In 1895 Osage county was the third in the state in the amount of corn raised—over five million bushels—and last year it was about the seventh. It would be safe to say that there are not ten counties in the United States that outdo it in the number of cattle fed and fattened last winter. The educational advantages cannot be excelled in any state. I can stand on a bluff just east of my home and count ten school-houses and five churches within the radius of twelve miles, and the sixth church is behind a mound. Good improved farms can be bought for from \$14 to \$50 an acre; unimproved for from \$10 to \$20. Kansas City, ninety miles distant, is the best cattle market in the world, and has sent out this past year more feed and stock cattle than Chicago and Omaha combined. Osage county has advantages, such as climate, soil, locality, water, fuel, cheapness of fuel and land, schools, churches and good society, that are hard to duplicate.

N. R. S.

Olivet, Kan.



Intelligent people in this day and age almost without exception, protect themselves against small-pox, by vaccination. Consumption kills in a year more people than small-pox, cholera, yellow fever and all known plagues kill in fifty. Tens of thousands of intelligent people recognize that they are threatened by this deadly disease, but take no precautions against it.

Consumption approaches its victim step by step. First there is a little "out of sorts" feeling, the digestion isn't just right, the appetite falls off, the liver is inactive, the assimilation of the life-giving elements of the food is imperfect, the blood gets impure and the body is improperly nourished. These conditions get worse and worse. The heart through the arterial system is pumping thin, poisonous blood into every organ of the body. The organs that are inherently weakest break down first. Ordinarily the lungs. As the last straw that breaks the camel's back comes a cold, however slight. This, with the accompanying cough, completes the work and an invasion of the germs of consumption follows. Dr. Pierce's Golden Medical Discovery cures 98 per cent. of all cases of consumption. It corrects the conditions that lead up to it. It is the greatest blood-maker and flesh-builder known.

K. C. McLin, Esq., of Kempsville, Princess Anne Co., Va., writes: "When I commenced taking your 'Discovery' I was very low with a cough, and at times spit up much blood. I was not able to do the least work, but most of the time was in bed. I was all run-down, very weak, my head was dizzy, and I was extremely despondent. The first bottle I took did not seem to do me much good, but I had faith in it and continued using it until I had taken fifteen bottles, and now I do not look nor feel like the same man I was one year ago. People are astonished, and say, 'well, last year this time I would not have thought that you would be living now.' I can thankfully say I am entirely cured of a disease which, but for your wonderful 'Discovery,' would have resulted in my death."

Our Farm.

THE POULTRY YARD.

Conducted by P. H. Jacobs, Hammonton, New Jersey.

FEEDING OF GRAIN.

IT is never a mistake to call attention to feeding, no matter how frequently it may be done, as there are new candidates for information every week, and the inquiries that come in are usually of a kind that have been answered time and time again. It is not necessary to continually advise readers to give plenty of food, for they are more addicted to giving too much rather than too little, though the tree-top roosts still exist on some farms where poultry is not regarded as stock, being permitted more from usage than for any profit that may be expected. The farmer who has raised a crop of corn will share it with his hens, and liberally, being satisfied that he has done his duty with them, and that they should lay is to be expected, as fowls having plenty of corn are certainly prepared to stand the cold and produce eggs, according to his views. The position taken by the farmer is correct to a certain extent, for should the food be something else, and corn omitted, the hens would not fare so well unless the food is of a kind that will perform the same functions as corn; and as corn is the cheapest grain that can be used, the farmer is not making any mistake in giving it to his poultry. But the hen is a daily producer, like the cow, and while she may satisfy her bodily necessities with corn, she cannot produce articles (eggs) that contain in their composition substances which are deficient in corn. The hens will eat the corn and become fat, but they will have a desire for something else, and will not eat the corn at all for awhile if other food of a different character is given. Food containing more nitrogen and mineral matter than corn should frequently be substituted for it. For instance, a mess of bran and ground oats moistened with milk makes an agreeable and beneficial change. A ration once a day composed of three parts bran and one part linseed-meal, given for a week, will assist in egg production. This may be varied by an allowance of chopped lean meat occasionally, and finally cut clover hay, scalded and sprinkled with corn-meal, will be found excellent.

IMPROVEMENT OF TURKEYS.

The Rhode Island experiment station has given much attention to turkeys, and the results of the work done in that direction have proved beneficial to the whole country. One of the facts demonstrated, although attention had been called to the matter before, was that the domestic turkeys were bred without regard to vigor, and that no care was used in preventing inbreeding. To prove this claim, wild turkeys were used for crossing on the domestic varieties, and at once the effect was very marked as soon as the eggs were used and the young turkeys hatched. Every comparison made of the losses of young turkeys showed that the half-wild turkeys were easier to raise and entailed less labor in care. Not only did the first cross prove favorable, but the cross of the half-wild gobbler and common turkey-hen produced offspring that were much harder than the young of the common varieties. Not one third of the young turkeys hatched in this country live to be three months old. This great mortality is caused by inbreeding and the large lice on the heads. If only one half the losses of young turkeys can be prevented, the saving and gain to farmers who make turkeys a specialty would amount to thousands of dollars, and the cost of new blood will be but a trifle compared with the benefit derived.

THE BEST DUST BATH.

In summer the best dust baths are made by spading places in the yard, each about one yard square and ten inches deep. If stones are in the dirt, it should be sifted. Make the place where the sun can shine on it, so as to keep the earth dry, and after every rain the dirt should be again turned over with a spade or fork. Care must be used in having the dirt fine and free from pebbles, or the hens will not use it. If they can have such a place in which to dust themselves, they will easily keep their bodies free from lice.

HOW TO DESTROY LICE.

The management of fowls in summer, when the weather is excessively warm, demands more care than is usually given. Lice will breed and multiply so rapidly as to completely ruin the flock almost before the owner is aware of the fact. Farmers who do not give any attention to fowls in summer, permitting them to roost inside or outside of the poultry-house, sometimes find their flocks in a condition in which many are sick or droopy without any apparent cause, and they pronounce the disease cholera, proceeding to give remedies therefor when the cause is really lice. Not only will the poultry-house be swarming with lice, but also the fences, wood-piles, trees or wherever the hens may roost, and it is useless to attempt to get rid of lice on the hens as long as the vermin have possession of every location where the hens roost at night. Not only during the day, but through the entire night the hens are annoyed by the vermin, until they become exhausted and begin to droop, finally commencing to die off. The use of remedies should be with the view of removing the difficulty at all cost. First the poultry-house should be cleaned, and the fowls made to roost therein, and not outside. Then the interior and exterior should be thoroughly drenched with kerosene emulsion, adding a gill of crude carbolic acid to every quart of the emulsion before adding the water. The point is to do the work so as to save labor afterward. To destroy some of the lice, and allow them to multiply, is to waste time and labor. Besides, there are eggs of lice hatching every hour, and it is essential to kill the young ones as fast as they appear. To make the work sure, the house should be thoroughly drenched every day for a week and once a week thereafter. Every portion of the interior must be saturated—nests, roosts, walls and floors. During very warm days lice will be in swarms in three or four days in a house that before showed no indication of their presence.

LATE CHICKS.

By carefully observing the chicks that were hatched this year it will be found that the late ones are more compact in appearance and have shorter legs than those hatched early, even when both the early and late ones are from the same parents. The early chicks will get their height before filling out, but the late ones will not grow in height any longer than the appearance of frost, but they thicken in body and appear compact. In reality they are not as heavy or as large as the taller early ones, their shorter legs simply giving them the appearance of strong, healthy chicks. They will never become much larger, as the winter usually ends their growth, and it will pay to market them when of the weight of two and one half pounds each.

SHIPPING DURING WARM WEATHER.

To put a lot of fowls into a box, or even into a well-made coop, on a warm day, and send them to a distant market, is to incur a risk of loss. There is nothing saved by utilizing every square inch of the space, for when the coop is crowded the fowls must remain where they happen to be in the coop when the car is in motion, hence they can get no water, nor do they know that water is at the other end of the coop. A large number of the live fowls that reach the market lose weight on the journey, while with them are quite a number of dead ones.

ASTHMA AND HAY-FEVER CURE.—FREE.

A sure specific cure for Asthma and Hay-fever is found in the Kola Plant, a new botanical discovery from the Congo River, West Africa. Many sufferers report most marvelous cures from its use. Among others, Mr. Alfred C. Lewis, Editor of the *Farmer's Magazine*, and Rev. J. L. Combs, of Martinsburg, West Va., were completely cured by the Kola Plant after thirty years' suffering. Mr. Lewis could not lie down at night in Hay-fever season for fear of choking, and Mr. Combs was a life-long sufferer from Asthma. Hon. L. G. Clute, of Greeley, Iowa, writes that for eighteen years he slept propped up in a chair, being much worse in Hay-fever season, and the Kola Plant cured him at once. It is truly a most wonderful remedy. If you are a sufferer you should send your address to the Kola Importing Co., 1161 Broadway, New York, who to prove its power will send a Large Case by mail free to all who need it. All they ask in return is that when cured yourself you will tell your neighbors about it. It costs you nothing and you should surely try it.

COST OF CURING DISEASES.

More flocks are destroyed by attempts to cure disease than by general mismanagement. The hens comprising a flock are separate individuals, although the flock may be said to be only one. They eat and drink from the same sources, and they travel over the same ground day after day. It is almost as expensive to confine a hen in a yard in order to separate her from the others as it is to confine a hog, hence farmers cannot afford to use proper precautions necessary to prevent the spread of a disease. When a common hen, worth perhaps not over fifty cents, shows symptoms of roup, canker or cholera, the first thing usually done is to attempt to cure her with some remedy. The labor and cost of the remedy may exceed the value of the fowl, but the farmer will not hesitate to do his best to save the bird, and in the meantime she communicates the disease to others, the whole flock soon becoming affected. Now, the value of a single bird is not a great sum, but the loss of a whole flock becomes quite an item. The cheapest and safest mode is to destroy any fowl discovered sick with a disease which may be of a character to spread, as attempted cures will be time wasted and may result in a loss of all.

HARDINESS AND CLIMATE.

In the northern section of the United States careful attention should be given the selection of breeds. It should not matter to the farmer whether some particular breed may lay a few more eggs during the year than another, as his object should be to keep only those that are hardy and able to stand the cold winters. In making a selection, the proper course to pursue is to visit the yards of those who have fowls that have given good results in his section, and in purchasing stock aim to select the most vigorous. Breeds that have small combs, and which are heavily feathered, should thrive better in winter than will others, but such breeds should have also been bred for vigor. It is of no advantage to buy special prize-winners when the awards have been for special points in the show-room, but the birds should be pure-bred, however, having stout limbs, deep breasts and eyes indicating health. It is the hen that lays every week in the year, except when hatching chicks or undergoing the process of molting, that pays the most, but such hens can only be had by careful selection and due consideration given climatic conditions and proper management.

THE BEST REMEDY FOR BOWEL DISEASE.

When the fowls have bowel disease, shut off all food and allow them to fast or pick up their food. They will recover sooner from the difficulty by such treatment than when medicine is given. A tablespoonful of lime-water in each pint of drinking-water is a simple remedy which often serves as a cure, and ten drops of tincture of nux vomica in one half pint of drinking-water for a few days will often check bowel disease when all other remedies fail; but the main point is to withhold all food for forty-eight hours, and then allow only one meal a day for a week or ten days.

HOT WHITEWASH.

When using whitewash, apply it as hot as it can be applied, and have it thick so as to cover the cracks as much as possible. Whitewash will destroy lice if put on the walls properly, but the thin, watery whitewash usually applied does but little service. In addition to its advantages in destroying lice it also makes the interior of the poultry-house light and cheerful, as well as destroying germs of disease. A gill of crude carbolic acid to every gallon of whitewash will render it more efficient as a disinfectant.

CLOVER FOR POULTRY.

Clover contains more mineral matter than grain, and the hens will relish it highly. If the flock is confined in yards, give finely cut clover, or place sods in the yards for them to pick. Bulky food is of great advantage to poultry, as it serves to assist digestion and promotes health. Variety can be best secured by the use of green food, as not only the leaves but the seeds are relished. If less grain is given, and more bulky food, the hens that do not now lay will soon begin to supply their quota.

INDICATIONS OF OVERFEEDING.

A hen will only perform a certain amount of work in the production of eggs in a year, and if she is forced at some seasons she will take her resting spell later. If she is fed heavily, and her eggs are large, it indicates that she is fat, and especially if soft-shelled or double-yolk eggs appear. In such cases the sooner the food is reduced the better; and when eggs begin to come of larger than normal size it means that too much food is given.

CORRESPONDENCE.

COAL-TAR AND LICE.—Having noticed many inquiries in regard to getting rid of "chiggers," I send the following, which I know to be a good and perfect remedy: Take coal-tar, and add kerosene in proportion of one quart to a gallon of coal-tar. Paint the roosts and nests with it. If a hen is placed in a freshly painted box, every louse and mite will be dead in fifteen minutes. When a hen comes off with little chicks, place her in a newly painted box, and let her remain two hours; then give her the chicks. There will be sufficient of the mixture on her feathers to destroy all vermin. There are chips to be had at the gas-works, used for purifying the gas. These chips, if placed in the nests, will drive vermin away. The coal-tar is twenty-eight cents a gallon in this part of the West. J. A. McM. Spangle, Wash.

INQUIRIES ANSWERED.

Throat Disease.—M. D., Chelmsford Center, Mass., writes: "My hens make a guzzling noise in the throats, some having died. I can find nothing the matter."

REPLY:—It is difficult to assign a cause with so few details. It is possible that they have canker, the remedy being to add a teaspoonful of chlorate of potash in a quart of drinking-water, and allowing no grain or food other than from the range.

Lost the Use of Their Legs.—M. W., Broadhead, Wis., writes: "I have chickens that have lost the use of their legs, but otherwise they are well."

REPLY:—If they are chicks, it is due to forcing them too rapidly; but if the inquiry alludes to hens, they should be removed from the male.

Large Lice.—J. B. F., Norfolk, Va., writes: "Within the last two weeks my chickens have been sleepy, refuse to eat, lose the use of their limbs, and die."

REPLY:—Probably caused by the large lice on the heads, for which apply the heads with melted lard. Also look for small mites.

Warts on the Head.—M. J. H., Mobile, Ala., writes: "Give a remedy for warts on the heads and bills."

REPLY:—It is a southern disease, seldom appearing North, and is claimed to be due to attacks of insects or parasites. A mixture of cedar-oil, vaseline, ichthyol and crude petroleum applied once a day has given good results.

LEE'S LICE KILLER kills all lice, mites, fleas, etc., on poultry and stock. Does away with the old fashioned way of dusting, dipping, greasing, etc. You paint the roost poles, the lice killer does the rest. A few cents' worth will do the work of a dollar's worth of insect powder and with no labor. Pamphlets and circulars free. 4¢ page book on "Vermin" and diseases of Poultry and stock free for 2¢ stamp. **LEE'S TONIC POWDER** makes the hens lay. **GERMOZONE** is a cure for nine-tenths of the diseases of poultry and stock. Our books tell all about them, with testimonials. 1200 agents in every state in the Union and more wanted. Write us. **GEO. H. LEE CO., EXETER, NEBRASKA.** Mention this paper.

HEAD LICE on chicks and Poulters are thick this summer. Lambert's Death to Lice ointment will fix them and brighten the broods. Trial size, enough for 50 chicks, 10¢, postpaid. Book Free. D. J. Lambert, Box 303, Apponaug, R.I. Mention this paper.

WALL PAPER Write to the largest wall paper house in U. S. for samples—mailed free. From 2½¢ etc. to \$8½ a roll—8 yards. Our prices 50 per cent. lower than others. **KAYSER & ALLMAN, PHILADELPHIA.** 952-954 Market St. 419 Arch Street.

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TOLEDO, OHIO.

What is the Missing Word? SEE PAGE 19.

Our Fireside.

RAIN AND SHINE.

Can't have sunshine all the time—
Got to come a rain;
The dry land, it gets thirsty,
An' the mountain an' the plain,
They cry out fer a drop to drink,
An' all the wiltin' flowers
Is glad to see the rain fall free,
An' freshen with the showers.

Can't have sunshine all the time:
Glad fer rain to fall;
Fills the wells an' makes the dells
Look fresh an' sparklin'—all.
The raindrop makes the roses grow,
An' if the rivers rise,
They water all the land, an' go
Jest singin' 'neath the skies.

Can't have sunshine all the time:
I like a rainy day;
Fer that's the time fer reading books,
Or making fiddles play.
To home, or to the grocery-store,
I'm happy when it rains;
Fer they need it on the mountains,
An' it's welcome on the plains!
—Frank L. Stanton, in Atlanta Constitution.

Sylvester Gibbs, Forgetter.

BY ANNIE HAMILTON DONNELL.



YOU won't forget, Sylvester?"
"Forget to be married!"
Sylvester Gibbs' near-sighted eyes peered at the little woman in injured astonishment. Then he laughed, too. His deep bass joined her sweet treble musically.
"I'd sooner forget my—"
"Dinner. But you do that, you know, right along. You're such a ridiculous boy, Sylvester!"
"Ahem!"

He waited for the rest.
"But I—I like you, so there, now! Why in the world do I?"
"Query, why? Refer to 'Cupid on Love,' volume one."

Sylvester's voice was gravely didactic. Little Esther Holland looked up at her big, handsome, awkward lover, and sighed gently. She laid down her embroidery, and held out her hand to him.

"Come and sit down on your footstool, sir, and learn your lesson," she said.

They had set the day for their marriage at last. Already Esther had decided it.

"Now listen! The fifteenth day of May, year of our Lord one thousand eight hundred and ninety-one. Now!"

"Fifteenth day of May," repeated Sylvester, slowly, looking up into her sweet face, with his big soul in his eyes. Her own eyes met the look, and the lesson was interrupted. When it began again later, Esther sent her pupil out in the door to toe the mark.

"Now," she cried, her two cheeks rose-flushed, "when are you going to—to-do it, you know?" she ended limply.

"Do what 'm?"

"Well, go and get married?"

The pupil plunged his hands into the thick tangle of his hair, and swayed uneasily on his "toeing," close-set feet.

"The—ah—(confound it!)—the "twenty-fifth day of April," he said, straightening himself in sudden triumph.

"Sylvester Gibbs!"

"Isn't that soon enough? Well, say the twentieth, then, or—to-morrow."

Another recess intervened, and school closed for the day. The arrangements were all made when Sylvester rose to go home. The loud clamor of the dining-room clock and Aunt Agatha's warning thump of chairs on the hard-wood floor had brought him to his feet, precipitately.

"It's all settled, dear," Esther said, softly, "and nothing at all for you to do but speak to the minister. You are sure you'll do that right—not speak to the doctor instead, or anything dreadful like that? It makes me shiver to think what you might do, you ridiculous—darling—boy! Can I trust you, Sylvester?"

"On my soul I swear it! Poor little woman, what a load of trouble she's taking on her shoulders—think of it, for all the time to come! There's time—will she back out? Hey? Look up here, Esther."

He tilted her face gently up toward his and searched it a little anxiously. It was instantly buried in his coat-sleeve, and Esther cried in muffled indignation.

"Shame on you, naughty boy! You don't deserve any—me."

"No more I don't, dear child. But think of them—all the blunders I shall commit (confound 'em!) between now and when we're old, Esther. They come from all points of the compass—from the east and the west and the south, and go on converging and only ending in the vanishing-point of—death."

They'll draw you into their miserable tangle, little girl. Aren't you afraid?"

Esther's answer was plainer than words.
"Besides," she added to it, gaily, "I shall cure you of such nonsense, Sylvester Gibbs, or else do the remembering and things for you. Oh, you shall see!"

She got his overcoat and hat from the hall.
"And you won't forget—first, to speak to the minister?"

"First, to speak to the minister (so help me Dionysius)."

"Second, to come yourself?"

"Esther!"

"Well, I can't help it. That's what you're the likeliest to forget, dear boy, and it would be such a drawback, don't you see?"

"Esther Marie Holland, I will come to your wedding! I swear it by my sword!"

"What day will you come?" cried Esther, mischievously.

"On your wedding-day. I will be there, I swear it!"

"And that will be?"

"The fifteenth day, madam."

"Good. Of—?"

"April," promptly.

"Sylvester!"

"I—I—should say May."

"Then do say it! Why, it's almost the fifteenth of April now. Does he think a woman can get married in a dainty gown? Begone, sir! Wait, here is your bundle!"

"Bundle?"

"Why, yes, don't you remember, dear? You had it when you came, and left it on the hall table."

The puzzled expression of Sylvester Gibbs' face changed swiftly to delighted remembrance. He stepped back into the hall.

"No, no, child, open it yourself—here under the gas-light. I brought it for you—just a little present, you know—a little—ah—trifle."

He watched her untie the string, eagerly. It was a bulky package, with odd knobs protruding into the wrapper, and a creaky sound to it, as it moved under Esther's little white fingers.

"You dear boy," she murmured, opening it, slowly.

"Sylvester!"

"Great heavens and earth!"

The gas-light caught the luster, immaculate, wrinkleless, of a freshly laundered shirt. Two or three stiff, coiled collars slid to the floor with a crackle.

Sylvester Gibbs crushed the bundle together, and crammed it into his overcoat pocket. His beardless, sensitive face was a deep red color.

"My laundry!" he muttered, confusedly. "I called for it on my way down under the delusion that I was going home. I—I forgot again, Esther." He appealed to her with shamed entreaty. "It's one of those blunders I warned you of," he added, trying to smile.

"It's all right," Esther said, laughing, and poking his arm with little reassuring prods of her finger.

"And it must be a very nice laundry—there, you shan't be teased! You're the dearest boy in the world if you forget everything forgettable—except to—come to my wedding!"

"May the fates tar and feather me if I forget that!" ejaculated poor Sylvester.

"There, good-night! Quick! I hear Aunt Agath' poking the fire, and that's the last gun. Run along—well, just one more, and that's all!"

"One more?"

"Not another one, Sylvester Gibbs!"

Esther stood still under the gas-light, and listened to the retreating steps, until they were but faint taps—fainter, fainter—in the distance. She sighed gently.

"He forgot that, too—dear boy!" she murmured, a little ruefully. "And I shall never know what it was. I suppose it's in his pocket this minute in blessed oblivion."

Her foot struck something on the floor, then something else. She stooped to pick them up.

"Esther! Esther!" a patient, tired voice called. "Is he gone?"

"Yes, Aunt Agath'. I'm coming now," Esther called back, putting the discarded collars into folds of her dress, with a little preliminary caress.

Sylvester Gibbs plowed home, thinking perturbed thoughts. The crushed bundle in his coat pocket creaked at every one of his long, swinging steps, and reproved him audibly. He growled under his breath at intervals.

A smart shower, one of April's unheralded, fickle little rains, was just beginning, and the slanting drops smote his face sharply. They pattered down into his pocket, and added the last touch of ruin to the offending bundle there.

Confound it, what an ass he was! Foregoing blunders that had lain in blessed oblivion in the cobwebbed corners of his memory stalked out ruthlessly now, and danced sardonic measures through his mind to the waltz tune of the rain. They made a long procession, and tripped and stumbled over each other in wicked haste. One loomed higher than the rest. "Ho! thought you'd forgotten me, did you?" it hissed in his ear. "Thought you'd buried me in a cobweb shroud? Listen! Once a man, with a beanti-

ful speech on the end of his tongue, went to 'propose' to the little woman he loved. I went, too. Oh, I was there! He had the little speech all ready, and when he got there he said it to—"

"Aunt Agatha! Aunt Agatha! Aunt Agatha!" shrieked the sardonic daneers in chorus.

In a college in a western town Sylvester Gibbs held the position of professor of geology, at a good salary. Just at present he was enjoying a year's holiday of needed rest and especial study in his beloved work. For to Sylvester Gibbs a curious bit of stone with a long three or four storied name, or an ancient fossil with a pedigree yet longer, was of intense interest until little fair-faced Esther Holland stole through his abstracted senses into his heart of pre-eminent importance. Little Esther had usurped the fossil's place in a measure, though the soul of the man still yearned over them fervently.

Sylvester Gibbs' chief fault was his extreme absent-mindedness, and it dominated perpetually his outgoings and his incomings. He was never safe from it for a moment. Until he had known Esther the continual troubles into which it had led him had only distantly affected his peace of mind, but now they were fraught with keen poignancy.

"Confound a man that can't remember his own name!" he muttered, as he strode on in the slanting rain.

"Confound him, I say!—ought to be kept in a straight-jacket—ought to be tarred and feathered!"

In sudden access of chagrin he grasped the poor, shapeless, unlaundered shirt out of his pocket, and flung it away into the darkness. He heard it fall into a pool of water with a faint splash.

When he got to his boarding-place his letters were waiting for him on his table beside a lighted lamp.

But before he would allow himself to open them, or even take off his wet coat, he had a duty to perform. A little calendar—one of those arranged so that each month when ended can be torn off and the new one be brought to the front, lay on his table conspicuously prominent. It was one of the necessities of Sylvester Gibbs' existence. Next to his watch it was his chief regulator. "Fifteenth, fifteenth," he murmured, as if he were saying his lesson again to Esther. He took up the calendar, and with a pencil made a dark circle around the number 15 upon it, tracing it again painstakingly.

Then, with a sigh of relief, he took up his letters, forgetting his damp overcoat altogether.

It often happened that if the top letter of the little pile happened to be of special interest, the others suffered oblivion for longer or shorter times—days and weeks even.

That happened to-night, for on the top lay Jack Traips' letter. Sylvester tore it open, eagerly. Jack was an old chum, and as fossil-mad as he was himself. He was out in Wyoming now investigating the Jurassic beds with great fervor.

"Dear Syl, old fellow," he wrote, "I've got news for you 'that' stupendous it'll knock your spectacles clean off your nose! A Pterodactyl, man—think of it! And that's not all. I'm breaking it to you easy, like the man who brought the news of the demise of his oxen to his master. 'One o' the critters is dead, sir,' says he, 'an' the other one's dead, too.'"

"It's a Dermodactylus montanus, or I'm a sinner! Man alive! can't you come 'traipsing' out and help a fellow? Toss your trinkets into your grip—and mind you don't forget your calendar—and catch on behind the fast express. Hurry up, there's a good boy! I'm in doubt about his tail, and need you right off. Yours until you get here."

"Great heavens and earth!" exclaimed Sylvester Gibbs. He snatched out his watch, and made a rapid calculation. Twelve-forty, was it, that express? Confound it! when did it go out? It was ten minutes past twelve now. He re-read the letter, snatched the little calendar from the table and hurried into his bedroom. He could not find his bag, and after a frenzied search in all the impossible nooks gave it up. The next thing was something else that would hold his motley collection of belongings—ah, just the thing! He slid a pillow out of its case and crammed in the assortment of clothes and brushes, boots and collars indiscriminately. It made a bulky, uncouth bundle. He tied the month together absently, not in any way appreciating its ridiculousness—not seeing it, indeed. All that was needed to make the picture complete was a stick on which to sling the bag over his shoulder.

Then Sylvester Gibbs rushed out into the night, and scurried to the railroad station. It had stopped raining, and a skyful of stars laughed down at him in concert. A helated pedestrian or two looked at him in astonishment. A policeman involuntarily hurried after him for a few blocks.

A Pterodactyl! Dermodactylus montanus! Jack always was in luck, confound him! Why hadn't he gone out there himself instead of coming to this little pok—then he remembered Esther. Her sweet face looked

at him with grieved, reproachful eyes. Dear child! And he was running away from her. But he would write back to her from the next station, and she would surely want him to go—a Dermodactylus! Besides, there was plenty of time before the fifteenth—plenty. He was barely in time for the express.

"Well, this is traipsing!" he thought, with a laugh, as the train thundered out of the station toward the Jurassic beds of Wyoming.

He settled himself and the knobby pillow-case with complacent satisfaction, and fell into a pleasant doze.

A week later, on the fourteenth of April, he was rummaging among his possessions, and came upon the little calendar. The heavy black circle around the number 15 stared at him remindingly, persistently. And above it on the little leaf stood out in clear, plain letters the word April. Sylvester Gibbs gave a gasp of terror. He held the calendar up close to his glasses to make sure—April 15th! He had forgotten. Confound—that was the day, was it? Of course—of course—April 15th—April 15th. The words hummed in his ears like a distracted dirge.

He felt the perspiration starting from all the pores of his body.

Esther—poor child! oh, poor child!—was right. He had forgotten to be married—great heavens and earth!

Jack Traips sauntered in upon him with his long, leisurely swing.

"Holloa! what's in the wind? The man looks like a ghost at his own funeral. Blest if he doesn't look as cut up as old Pterodactyl himself! What's up, Syl?"

"Jack, what day of the month is it?"

"He's crazy. Got the month-machine in his hand, ticking off the days right under his nose, and wants to know what day o' the month is it!"

"What day of the month is it?" roared Sylvester.

"Fourteenth."

"Great heavens and—where's my hat?"

"Stark mad! Wants to know where's his hat!"

"Where's my hat?"

"On your head!"

Sylvester Gibbs raised both hands and crowded it on more securely. His hands shook.

"I'm going home. I must get my grip."

"Get your pillow-sham! Come, old man, unbosom. What's your hurry? Don't you know there isn't another train on this heathen branch before to-morrow morning?"

"Great heavens and earth! Where does it strike the main line?"

"Brander."

"How far?"

"Oh, two looks and a half. Man alive, you're not going to Brander before dinner?"

"Dinner! I'm going before breakfast."

"Can't do it, my boy—too late."

Sylvester snatched out his watch. Confound it, had he been to break—ten o'clock! The threads of the fates seemed tangling around his feet.

"Jack," he cried, imploringly, "get me some kind of a go-cart, and I'm yours everlastingly! I've got to catch an express at Brandy or Champagne or whatever the confounded place is, whether there's an express or not!"

"The dickens you have!"

In an incredibly short time Jack Traips was driving his perturbed, bewildered friend across country to Brander.

"Going to unbosom, old man?" he asked, gently, after a long silence, broken only by the clatter of the spinning wheels and the mare's hoof-thuds on the hard road.

Sylvester turned his anxious face toward Jack.

"I—I've got to go to a wedding to-morrow," he said.

"The dickens! Sister's—brother's?"

"Mine."

Jack Traips blew a shrill blast through his pucker lips.

"Great Caesar's ghost! Get up there, old lady! Move lively!" he ejaculated, tightening the lines and reaching for the whip. "G'lang!"

They spun along with fresh speed, and by three o'clock were drawing into Brander. There was no express until night, and Sylvester Gibbs waited as best he could.

An accident delayed him still more when he was well started. A freight had been derailed on ahead, and the work of clearing the track was maddeningly slow.

He sat with his watch open on his knee, and groaned under his breath.

Once fairly under way again and forging along through the night, he could not sleep. He laid his head on the pillow-case, and went on with his bitter, wild self-communings.

"She set the fifteenth, poor little girl, and it's got to be the fifteenth or never. She's an angel, but she couldn't be expected to marry an ass the day after his wedding! It's got to be to-morrow, and—good Lord, I've got to be there!"

He had crazy impulses to set back the hands of his watch, to go out on the rear platform and push—anything to make time—to get there sooner!

"Get into S—? Well, we're two solid hours

behind time now, along of that darned freight." The brakeman opposed his big, placid bulk to the entrance of Sylvester's seat, and looked speculative. "But I reckon that won't hinder her much of any in the long run. She's puttin' on steam."

"And if we're on time?" quavered unhappy Sylvester.

"Well, she'll fetch us into S-s-s-s-about-lemme see—" he consulted his time-table. "Here you have it!—nine o'clock to-morrow evenin', but there's no tellin' that there won't another darned freight set down on the track between here 'n' there. In a hurry, ain't ye?"

He tried to look sympathetic, and went on his way, shhding his whistle.

In the depths of one of the big pockets in Sylvester Gibbs' overcoat hid the little forgotten gift that the laundry package had personated so unfortunately. Now, as the coat lay across the back of the joiting car-seat, it asserted its right to the principle of gravitation, and fell with a gentle thump to the seat beside him. He picked it up, curiously. The momentary wonder it excited in his mind relieved the tension of his excited nerves a little. What in the world was it? How came it in his coat pocket? He never bought—ah! the little silver card-case he had bought for Esther. It caught a faint glimmer from the light overhead, and twinkled up at him mischievously. So he had forgotten that, too? It seemed to Sylvester Gibbs just then that he had forgotten everything worth remembering from the foundation of the world. But, try as he would, he could not forget that to-morrow, the fifteenth of April, was his wedding-day, and he was nine hundred miles away from his little bride!

But meanwhile the train was forging ahead, and materially reducing the distance. Eight hundred—six hundred—one hundred.

Sylvester Gibbs, haggard and tumbled and unshaven, stepped from the train at last. It was half-past nine, and a fine drizzle was in his face. The fog was dense, and through it the station loomed indistinct, and the station lights winked mistily. The train shot away, curving and balancing like a sinuous phantom serpent.

Something, whether the long vigil on the express or the sudden beginning of Sylvester Gibbs' late reformation, or only chance, made two things come to his remembrance—the minister, and the white kid gloves Esther had said he must wear on his marriage day. He got them both.

"Is it not—ah—a little late for the—ab-ceremony?" questioned the good minister. He stood at his front door in his drah dressing-gown, with gentle amazement upon his placid face. He was not Esther's pastor—Sylvester had forgotten that address.

He had attended this man's church a good many times, and was slightly acquainted with him. That in itself was of great assistance now.

At the Holland home Esther sat reading and dreaming in her pretty wrapper. Aunt Agath' was away for a few days, and she and the serving-maid were alone. It was just the night to dream in, with the faintest tinkle of rain on the window for accompaniment. The big form of Sylvester Gibbs reared itself in the center of all the dreams, and appropriated them with cool assurance.

"The dear, ridiculous boy!" murmured Esther, "racing off to dig skeletons like that! And now he's forgotten even to write me. Wait until I get a chance to scold him!"

She smiled to herself over her dreaming. "Absent-minded boy (bless him!)—if he only doesn't forget—what, the bell ringing! This time of night!"

She heard Mary Ann's slow steps plodding to the door. Then Mary Ann appeared. "Some gentlemen to see you, Miss Esther—two av thim."

"Mary Ann! This time o' night? Who in the world are they?"

"Well, there's wan av thim is Misther Gibbs himself, an' the other wan looks like a praste. An' Misther Gibbs says will you hurry oop."

Sylvester, waiting at the foot of the stairs, heard soft footsteps couling and sprang half way up to meet them. He was haggard and cindery and pleading. Esther saw that first. Then she saw that he was wildly drawing on a pair of new white gloves. They were but half on, and their flat, empty finger-tips wavered aimlessly with his nervous movements.

"Esther! Esther!" he cried, in an agitated whisper, getting her into his arms and landing her under the gas-light in the hall.

"Esther, dear child—hush, don't speak!" He nodded violently toward the parlor, his finger on his lips. "I will explain—afterward. There is no time now. There's only just time to be married, dear. I've got the minister in there. He's got a hymn—ab, prayer-book. Dear child, come right in. Everything is ready. I will explain afterward—everything, dear. Esther, Esther, look up here, dear child! You will do it, won't you? Say you will. Say you forgive me, Esther! I've come just as fast as I could—I would have walked to get here quicker!"

His whispered words ran over each other

and tripped each other up. He was patting her cheek with entreating little flaps of the loose kid fingers, and gazing into her face beseechingly.

"Sylvester!" gasped Esther.

"Hush! dear child. Don't say it now—there isn't time. You shall scold me all the rest of my life to make up. Come, let us go in—he's waiting. You have only to say 'I, Sylvester, take thee, Esther'—it's like a little poem, dear child. Come!"

The minister's face appeared at the parlor door.

"I would suggest—ah—a little—haste. It is already my accustomed—ah—retiring hour," he said, mildly. "I am—ah—a man of habit."

He stepped out to them, looking at Sylvester.

"You have prepared—ah—witnesses?" he asked.

"Great heavens and—how many?"

"Two will be sufficient."

Sylvester wrung his hands. One of the white kid gloves dropped unnoticed to the floor.

"Mary Ann!" he cried, with sudden inspiration. "I'll go out and find the other."

The minister went back to the parlor, and bewildered little Esther sank down on the bottom stair to get her breath. Sylvester's pleading, haggard face appealed to her insistently. His eager voice ran on in her ear. Poor boy, how tired he looked! But what did it all mean?

She sat up straighter. Yes, that was it, of course—that was the only explanation. They had decided at the last minute to send Sylvester abroad on that scientific mission to investigate more skeletons somewhere. And he was going to sail right off, and was going to take her with him.

The outer door banged, and Sylvester came in with the policeman of their heat. He hustled him into the parlor, and came back to Esther. His watch was open in his hand.

"Esther, dear child," he said, eagerly, "can't you trust me? I will never do it again!"

And Esther, being a woman, and a loving one, trusted him.

"Thank goodness Aunt Agath' isn't here, and I'm my own mistress for once!" She took time to think.

With the policeman and Mary Ann for witnesses, and the placid little minister to do it, they were married.

Then the little minister hurried home to bed, and presently they were alone.

Sylvester took his little bride into his arms and kissed her.

"And I got here, after all, dear child—just in time!" he murmured, contentedly. "But it was a close shave, dear. I didn't forget to come to your wedding, did I, if it was at the eleventh hour?"

"Sylvester Gibbs—"

"Mrs. Sylvester Gibbs?"

"What are you talking about? I should think this was your wedding!"

"So be it, as long as you came to it—and the 'cop' and Mary Ann," he added, with light-hearted mischief. A great load had slipped off from his heart.

He took the crumpled calendar out of his pocket and held it up to her.

"This was what saved me, Esther—bless it! I should have forgotten to come if it hadn't been for this," he said, humbly.

Esther took in the little circled "15," the month's name, the whole mystery, at a single swift glance. Her face was a study.

"Sylvester, Sylvester, what have you done?" she cried. "You thought to-day was our wedding-day! You forgot to tear off the 'April' page before you drew that black line around the day!"

Sylvester Gibbs' face was a study then. He collapsed upon the sofa in unutterable, stupefied astonishment.

Great heavens and earth! what had he done?

"You dreadful, dreadful—poor, dear boy!"

For his chagrined, astounded face unarmed Esther. She could not bear the puzzled innocence in his eyes.

"Yes, you dreadful boy," she repeated more gently, "you've been and done it this time, and I haven't the heart to scold you. No, I haven't. But think of what they'll say—Aunt Agath' and the other minister and the folks that were coming—and the wedding-cake and all my pretty, pretty clothes!"

"Oh, no, no, Esther, don't do it! You'll drive me mad. Think of the folks that did come—great heavens, I—I—mean—"

Esther's sweet, clear laugh trilled out in sudden melody. The tears ran over her cheeks.

"You—yon ridiculous boy!" she gasped. "Oh, oh, oh!"

It took fully half an hour for the little tumult to subside into a resigned calm.

"But to think," Esther recapitulated for the third time, "to think you thought this was our wedding-day!"

"Well, isn't it our wedding-day?" Sylvester murmured, wickedly content. "Didn't the minister and Mary Ann and the co—"

"Now, Sylvester!"

"Now, Esther! What a dear little poem it

makes! And to think I've got you a whole month sooner—longer—dear child!"

Then late repentance overcame him. He caught his little bride into his arms, and held her there close.

"Poor little girl!" he said, tenderly, "she shall not lose all the fun. We'll be married all over again on our wedding-day, with the wedding-cake and the folks and all the other nice little fixings. Say the word, dear!"

Esther's face burrowed into his breast.

"No," she murmured, roguishly, "I—I don't dare to risk it!"

"SON MOLLIE."

BY HOPE DARING.

"How is your wife to-day, Mr. Kelly?"

"Very much as she was yesterday. She had a bad night."

"Humph! At her age it's hardly likely she'll rally." And John Harper, who really meant to be sympathetic, looked away from his neighbor. "I see you are waiting for the train. Expecting any one?"

"Mollie is coming home."

"Mollie? Why, her school hain't out, is it?"

"The holiday vacation commences next week. But, of course, she—"

"Now, neighbor Kelly," oracularly interrupted Mr. Harper. "I always told you it was a mistake the way you brung up Mollie. You let her come here to school till she graduated. Then she got that place to teach at Grauville last fall. Forty dollars a month is a lot for a girl to earn, but she'll never be one bit of good to you. Even now—"

The whistling of the incoming train cut short his discourse. Mr. Kelly hurried forward, and the next moment was holding a plump little figure dressed all in brown in his arms.

"How is she, father?"

"No better. The doctor says with good care she will regain her speech and the partial use of her hand and foot. Oh, Mollie, no one but God knows how it makes my old heart ache to see her lie there with no sign of life save her great dark eyes!"

Mollie Kelly felt her old care-free girlhood slipping from her as she stood there under the gray December sky. And feeling this, there came to her that sweetest of all womanly gifts, the maternal, comforting spirit.

She pressed her father's hand close between her own as she said:

"Poor father! She shall have the good care. Together we will nurse her back to health."

Then Mr. Kelly hurried away after the horse, and they were soon on their way. During the drive Mollie learned that the doctor had insisted on a trained nurse to care for her mother. Also that her cousin Laura, the daughter of Mr. Kelly's brother, was doing the work for the family.

The first sign of consciousness shown by Mrs. Kelly since the paralytic stroke, two days before, was when her daughter bent over the bed and tenderly kissed her. The doctor was present and keenly watching Mollie. He half expected a scene. The young girl grew very pale, but retained entire control over herself, soothing the sick woman with loving gentleness.

The next day the doctor consented to Mollie's taking the place of the nurse. The relatives of the Kellys, especially "Aunt Manda," Laura's mother, questioned the wisdom of giving so grave a responsibility into the hands of a girl "who don't know nothing but school-books." However, Dr. Greaves, who had known Mollie since her birth, so emphatically forbade any interference in the sick-room with Mollie's authority that even Mrs. Manda dared not disobey.

Two weeks passed by. While there was a decided improvement in Mrs. Kelly the utmost care and vigilance were still required.

Late one afternoon Mollie left her mother sleeping, and entered the sitting-room. Her face had lost some of its wild-rose bloom during the days and nights of anxious watching. Mollie's eyes were brown, and had a habit of looking straight into the face of the person she addressed. Her hair was a shade darker than her eyes. She had firm red lips and a dimpled chin.

She stood, her hands clasped before her, gazing in the huge fire that crackled and roared in the old-fashioned fireplace. On hearing her father's step she turned.

"Sit down, father," she said, drawing his arm-chair up to the fire. "Mother is sleeping, and I have been writing to Mr. Hardy, the president of the school-board at Grauville. I have resigned my position."

"Why, Mollie, you must not do that."

She laid her hand on his lips. "I cannot leave mother, even if a nurse could take my place, and Dr. Greaves thinks a change would be harmful. You would have to pay her ten dollars a week, just what I earn."

"It is not the money, child," Mr. Kelly said. "Your being here is everything to me, but mother and I always wanted to give you the best of a chance."

"Could anything be better than this? I spoke of the money, father, because I have

always wanted to help you as much as a son would. You remember you used to call me 'son Mollie.'"

In a short time Mrs. Kelly was able to sit up part of the time. Mollie then began to oversee the housekeeping, much to Laura's disgust.

"I know jest how things ought to be done a heap better than you do, Mollie," she declared one afternoon when Mollie insisted on the pantry being cleaned. "Hain't I helped your ma for the last three summers, jest fur an accommodation. Of course, I hain't a hired girl."

"That puts a different face on things," Mollie said, standing on tiptoe to sweep down a cobweb. "If you are not a hired girl, if you do not expect pay for your services, I would not think of asking you to clean the pantry. But I heard your mother ask father for your wages last night. If you are a hired girl, you may set bread to-night—make only half the quantity you usually do. It gets too dry. I am going to make sugared doughnuts. You have half starved us, Laura."

Miss Laura Kelly retreated to the pantry, slamming the door behind her. She was a dejected-looking maiden of twenty-six, tall, lank, with faded blue eyes, and red hair which was always in curl-papers.

Mollie was busy over her doughnuts when her father's coat and hat frosted with snow, entered.

"Sit down," she cried, merrily, "and see if my doughnuts are not almost as good as mother's."

Mr. Kelly obeyed, his wrinkled face beaming with contentment. It seemed so good to him to see Mollie intent on household duties.

"Father," she said, as he broke the second cake, "why can't you put up ice for the hutter next summer in that old tenant-house? Did I not hear you say you thought of selling one of the cows?"

"Yes. There are five, and your mother thought she could manage. But you and Laura can't."

"Does hutter pay?" she asked, deftly rolling her crisp, brown cakes in the sugar.

"Most the best of anything on the farm."

"Did not Mr. Harper want you to take a cow for what he owes you?"

"Yes; and if I get anything I'll have to. Perhaps I can sell her, though cows are cheap."

Mollie carefully lifted her kettle of lard to the table, and sat down by her father.

"I can make butter," she said, nodding her head. "Take the cow of Mr. Harper, and that will make six. We have a good barrel-churn. Let that young German, Carl Verner, come to-morrow and cut ice for you."

"Don't you suppose Algernon would like the work?"

"Doubtless he would like the pay and let you do the work. I don't want you to work so hard, father."

In a few moments Mr. Kelly went back to the barn. The pantry door had been ajar. Laura now emerged.

"I don't know what you air thinkin' of, Mollie Kelly," she began. "Six cows! I can't do the work for 'em, I want you to understand that."

"All right," Mollie replied, cheerily. "If you have the pantry cleaned you may bring up a basket of Tallman Sweets and get them ready to bake."

"What did you mean 'bout brother Algernon?" Laura asked, angrily.

"Oh, you listened to that, too. Well, I meant that Carl does twice the work Algernon does for the same pay. I am going to read to mother now. You keep up a good fire, and I will come and make cream toast for supper."

The following week Mollie discharged Laura. "Aunt Manda" tried to argue with her, but Mollie said she had engaged Carl Verner's mother to come each week and wash.

"I can do the rest until there is more milk and hired help. I am glad to save father a dollar and a half a week."

Mollie began to read up about chickens in the agricultural papers, and soon had several hens sitting. She had a long talk with her father concerning financial matters. She learned that while the farm was clear from mortgage and there were no debts, it was growing harder each year to meet expenses. Mr. Kelly also said that the low price of grain threatened him with still further embarrassment.

"Then raise less grain or feed it on the place, as the agricultural papers advise," Mollie said, gravely. "Let me raise all the calves this year, and keep those young pigs you talked of selling."

"Do you think it will be best, Mollie, 'son Mollie?'" and with the old pet name the farmer's worn face brightened. "Oh, child, I wish you knew how good it seems to talk things over with you! I am glad you are a girl, just the girl you are, for no one but a daughter could have cared for mother as you have. And, Mollie, you are more comfort and help to me than a boy could be."

There was a long silence. Mollie went and sat on the arm of her father's chair and rested her head against his shoulder.

"Thank you, father, for those words," she said, her brown eyes swimming in tears. "I

would rather have the memory of them than a college diploma."

Two days after this conversation there was consternation in the home of Thomas Kelly. Algernon had learned at the village that Carl Verner and his sister Bertha were to work the following summer for Mollie's father.

Algernon and Lanra had for several summers worked for their uncle. They always demanded good wages, and as they worked "for an accommodation," and were both "weakly," the result had been that Mr. and Mrs. Kelly had done by far the greater part of their own work.

Mrs. Manda hurried over to interview her husband's brother. He was not at home, and she received little satisfaction from Mollie.

"Father cannot do so much hard work himself," she said, plainly. "Then Laura told me she would not do the work there is to be done here. I am sure we have the right to do what is for our own good. No, you are not going in to vex mother about it," and Mollie slipped between her aunt and the sitting-room door.

"Mollie Kelly, how dare you speak to me like that?"

"I will tell you how I'll dare!" Mollie came a step nearer, her eyes glowing like coals. "You know that Dr. Greaves has said mother's life depended upon her freedom from excitement. I would dare anything, even personal violence, to keep you from annoying her."

Mrs. Manda saw her niece was in earnest, and departed, still very angry. Mollie cried a little when she was alone. But she soon wiped her eyes, and prepared her father's favorite beef stew for dinner.

The halmy days of May came, and Mrs. Kelly improved rapidly. All things at the farm were at their best.

In the kitchen Bertha presided—stout, ruddy-checked Bertha—her blue calico sleeves rolled above the elbows of her strong arms, her head almost bowed under its weight of flaxen braids. She had spent the summer before in the kitchen of a capable housekeeper, so Mollie found her own lack of knowledge often supplemented by Bertha's skill.

Out of doors the change was even greater. Mr. Kelly was surprised by the amount of work done by merry Carl, and found much less "day help" needed than in former years. They found time to work among the berries and small fruit; the garden was in early and free from weeds, and Mollie's chickens and calves prospered.

As for Mollie herself, she never found time to miss the round of social and educational duties that had filled her days. There were many young people in the community, and the village where her school-days had been spent was distant only an hour's drive. She had plenty of books, papers and magazines, but it was through Bertha that one of Mollie's pleasures came about.

One day Bertha asked Mollie to address an envelope for her. She was proficient in German, but confessed that she could not write English.

"I am ashamed," she said, the blood staining her fair cheek. "Grethen, my little sister, goes to school, and last winter she taught me to read a little English. Some day I shall learn to write it."

Mollie thought the matter over. The result was she began teaching Bertha, and in return received help from the latter in the study of German. This had not been included in her high-school course, but while teaching she had been a member of a German class.

There was little leisure time, yet they managed to accomplish a great deal. They learned to have a book open while they brushed their hair or ironed. They soon came to enjoy each other's company. Mollie never tired of hearing of Bertha's German home or her journey to America. While to the foreign girl the other's accounts of school life were more interesting than fairy tales.

When the June days began to paint the cherries on the many trees around Mollie's home with carmine, and the early raspberries began to ripen, Mrs. Manda began to grow more friendly.

"Shall I come over this week after berries, Mollie?" she called out one Monday morning, driving her old horse as near as possible to the line where Mollie was hanging out the week's wash. "And the cherries—why, some one is picking the early ones."

"Yes; I hired Freddie Myers for to-day. I promised Mr. Harmon that he should have three bushels of cherries this afternoon. The later ones will not do until next week. Then I shall be glad of as many pickers, to pick on shares, as I can get. As for the berries, Bertha and I can manage all that will ripen this week. The early ones will bring the best price."

There was a pause. Mollie was making with something much like fear. Her parents had never thought of selling the fruit, and Mrs. Manda had always helped herself to the best.

"Do you mean you air goin' to sell the

cherries and berries? Why, Mollie Kelly, I should think you would be ashamed of yourself!"

Mollie pushed back her bonnet and faced her aunt. "Why not sell fruit as well as grain? Aunt Manda, father needs the money. Instead of being ashamed I am proud that I can help him."

Mrs. Kelly was too astounded to reply. She started for home, and Mollie went on with her work.

The next two weeks were busy ones at the Kelly farm-house. Cherries, currants and raspberries, both black and red ones, were delivered at the village every day. Bertha's widowed mother and little sister helped, taking their pay in fruit, and many of the cherries were picked on shares.

Work in the house was lightened a little by the proprietor of a summer hotel a few miles away contracting with Mollie for a gallon of cream every day. He was also to take fruit, eggs, as many vegetables as they could spare and the young chickens.

Mrs. Manda and Laura waited ten days. Then they drove up one afternoon with three pails.

"The berries were all picked this morning," Mollie said, coming down-stairs neat and cool-looking in her black skirt and pink shirt-waist. "If you want cherries, you can pick in those trees by the well. I am going to the village with two bushels of cherries and thirty quarts of berries."

"Humph!" It was Mrs. Manda's sole reply.

"Stay to supper, both of you," Mollie went on, cordially. "I am going to have red raspberry shortcake."

Neither of them thanked her. However, when she returned she found her invitation had been accepted.

"Are you not going to take part of those cherries?" Bertha asked in a subdued voice, nodding toward the pails, which had been left on the porch.

"Yes, I am, if I get a chance," Mollie replied, compressing her red lips. "I don't believe I am really selfish, Bertha. I do not care for the value of the cherries, but I want to let my uncle's family know the day is past when they can use father solely for their own benefit. See how he has been imposed on in the way of hired help. Poor mother, too! I sometimes think if she had had such help as you are last year she might have escaped this long illness. Uncle Thomas never raises fruit, and he is younger and stronger than father. Father has always pastured his stock and furnished him with farm machinery. But his reign is over."

"And that of 'son Mollie' has commenced," said her father, who, unperceived, had entered the room. "You have opened my eyes. God bless you, child!"

Mollie's shortcake was a success, although when her aunt began on her third piece she said:

"It's too bad you will use baking-powder, Mollie. No one can make a good shortcake with it."

After supper Carl brought around the horse of Mrs. Kelly. It was not until she picked up her pail that she said:

"You hadn't took your share of these here cherries, Mollie."

Mollie hesitated. Plainly her aunt did not expect her to do it, and it did seem small. Still, to retreat now meant defeat. One moment, and she stooped for the pail.

"Too bad to keep you waiting," she said, blithely. "It will take only a moment."

Mrs. Manda's face flushed. "Maybe you better take 'em all," she said, savagely; but Mollie was at the other side of the kitchen, and if she heard, made no reply.

After the expenses of picking the fruit were paid, thirty dollars remained from the sale of it. The proprietor of the hotel continued to take the cream until late in September. He paid a good price for early apples, the few fine pears they could spare, and a part of the grape crop. The rest of the grapes were carefully shipped to the city, and netted the Kellys a neat sum.

Mollie's wisdom in urging her father to keep the pigs was manifest when pork brought a good price. Mr. Kelly had never made as much money in one year before, and his farm was in better shape than for a long time. Plans were laid to keep more cows another year, and a variety of small fruit to be put out.

Mrs. Kelly's health had continued to improve. It was evident she would never be strong, but she was free from pain and able to do some light work.

"Farming is not the vocation for which I was educated," Mollie said to her friend Mabel Joy, who visited her at holidays; "but I am needed here. We will make more money than if I taught, hired my board and mother kept a girl all the year. I feel, too, that I am not filling the place of some girl who must earn her living and has no home. I am happy, and I make my parents so. We have good society. Now that we have organized a Chautauqua reading circle, I shall keep up a regular course of study. So, Mabel, I have found my 'sphere.' It is the junior membership in the firm of Farmer Kelly and Son Mollie."

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Please mention Farm and Fireside.

Contest Closes July 31.

Don't delay in sending your guess in the missing word contest. Remember that the 4 \$100 bicycles are given for the first correct answers, but EVERY ONE who guesses the missing word gets a very fine book. For a description of the bicycles write to the National Sewing Machine Co., Belvidere, Ill. See page 19 for full particulars.

Our Household.

WHEN BLOOM OF LILIES IS GONE.

There are days in each life when the pulse
bounds with pleasure,
When love in its glory is gilding each treasure.
The roses and lilies are bursting with sweetness,
And whispering softly of summer's completeness.
But swiftly they fly, like the angel of dawn,
And the fragrance and bloom of the lilies
are gone.

There are doors in each heart that are bolted
forever,
And no one may force or their secrets discover.
There are graves in each breast, where white
lilies are bending,
And sighing of peace in a future unending.
How hopeless the soul, if the blush of life's
dawn
Fades away when the bloom of the lilies
is gone.

There are friends we have lost, and their
names are ne'er spoken;
Though living, we walk through a silence
unbroken.
There are troubles in life worse than death's
heavy finger,
And joys slip away, while the weary hours
linger.

Let us gather some sweetness from each rosy
dawn
To cheer when the bloom of the lilies is
gone;
Let us cast away pride, and the passions that
harden.
Like nettles that choke the fair flowers in
yon garden.
Let us gather up clusters of kind words and
wishes,
And beautiful deeds that are better than
riches.
They will shine in the light of eternity's
dawn.
When earth's withered roses and lilies are
gone.
—Viola Van Order, in New Orleans Pic-
nune.

HOME TOPICS.

CLEANING POULTRY.—Poultry should
be drawn as soon as it is picked,
or the portions of it that are next
the entrails will acquire an un-
pleasant taste. Some people object to
washing poultry at all, claiming that to
wipe them with a dry cloth is sufficient,
but any one who knows the habits of poul-
try would doubt this. They need to be
thoroughly washed, using a small cloth,
and not leaving them in the water longer
than is necessary; then wipe carefully with
a dry cloth, and hang the fowl in a cool
place until ready to cook it.

HOT-WEATHER HINTS.—Now that hot
weather has come again we should care-
fully watch that no cesspools, outhouses
or decaying matter of any kind become
breeders of disease. In many houses the
kitchen sink and drain are the avenue
through which fever gains admittance to
the family circle. Bits of food and grease
from dish-water lodge in the pipe, and ob-
struct the passage of water. This deposit
is kept constantly saturated, decomposition
takes place, and poisonous gases are
formed, which find easy access to the
house. In the country, where we have a
right to expect pure air, if anywhere, it
frequently comes into our windows laden
with pestilential odors from cesspool, barn-
yard or pig-pen, and it is to these agencies
that zymotic diseases frequently owe their
origin in a country neighborhood.

After making sure that our own prem-
ises are clean and pure, if a neighbor's
proves odious, it is but right that we
make complaint to them; and if the evil
is not then rectified, appeal to the proper

family that the water in the well was dis-
covered to be contaminated by a neighbor-
ing cesspool.

While the preserving and canning of
fruit is going on, the tired housekeeper
ought not to forget that her own health
needs preserving, and one unfailing recipe
for this is rest. Doubtless one reason of
our becoming so tired out at this season
is that we feel hurried all the time, one
piece of work crowds another, and we are
worried because we see so many things
waiting to be done. I know that often
the mind tires the body, and if I can keep
from feeling hurried and worried I can
work with less fatigue.

It is false economy to try to crowd two
days' work into one; and although times
are hard and money scarce, it is surely
better economy to secure the help of a girl
for a few weeks than to toil on, each day
becoming more weary, until at last out-
raged nature rebels, and illness for weeks
is the result.

The only safe rule in deciding this ques-
tion of economy is that "the life is more
than meat and the body more than rai-
ment."
MAIDA McL.

DOING NEIGHBORHOOD PLANNING.

There is usually in every neighborhood
at least one, and seldom more than one,
real "presiding genius," whose taste is
infallible, and whose abil-
ity to both plan and ex-
ecute is indisputable.
From every side she is ap-
pealed to for information,
and frequently she is
asked to lend a helping
hand in the making and
making over of garments,
from mother to daughter
of the family, and from
husbands to sons also.

This ability upon the
part of a farm wife may
be made to do excellent
service, and he made to
bring her an income at
the same time. It is too
often the case, though,
that one's neighbors come
to expect of the ingenious
woman her aid and her
time without compensa-
ting her in the least. They
come to expect her to give,
and not to expect to re-
ceive. And her time and
strength are too often uti-
lized by her neighbors, they
feeling that in praising her
exceptional taste she
should feel amply repaid,
and be glad to render ser-
vice at any and all times.

A woman thus endowed
should make charge for
services rendered. She
does herself and her fam-
ily an injustice when she
expends her own needed
time and strength without
receiving either help or money in return.
One's neighbors will respect her the more,
and at least none the less, if she puts
upon her time a monied valuation, and in-
sists that for services rendered she receive
its equivalent in some form. It is only
justice, and it opens up the way for one
to make the income that so many women
are seeking.

In a certain locality in the far West
lives one of the world's brightest women,
whose time was encroached upon by neigh-
bors, who, realizing her especial aptitude
for "making something out of nothing,"
besiege her upon all sides.

For years she was indiscriminately
called upon by every one about her, and

sure before making the offer that she
would not allow them to do it.

It was becoming burdensome in the ex-
treme. Mrs. Helpful was not strong, doc-
tor's bills were of frequent occurrence,
and times were very close with them. At
last a friend from the East, in making a
visit to the western home of Mrs. Help-
ful, noting how she was virtually imposed
upon by every one because of her kind-
ness of heart and her dread of offending
by making mention of the fact that com-
pensation would be very gladly accepted
in return for work done for these frequent
callers, who called with selfish motives
in heart, and well knowing they would
gain their end, insisted that no more of
such work should be done unless she
should make up her mind to ask and in-
sist upon being paid for it.

"You are working injustice to your own
household," said Mrs. Helpful's friend
and guest. "You have no right to do it."
And looking the situation over just as it
was, she concluded to begin making
charges for her time and her labor.

It did not please very well at first. This
departure from old ways of securing the
advice and help of a really competent
dressmaker, hat-trimmer, and a planner of
ways and means to an extent that looked
wondrous to the more staid and imprac-
tical of her acquaintances, had been un-



looked for, and was not kindly received
until they had time to become accustomed
to the new departure. But people stopped
coming to her with unnecessary work,
thus relieving her to a very great extent
of both the work and the unwelcome so-
ciety of a great many who had imposed
upon her. Those things that they could
not do, and must have done, and that they
felt they could not pay the prices for that
were asked by the village dressmakers
and milliners, they eventually brought to
Mrs. Helpful, and brought with them at
the same time the money to pay for. She
charged them but half, or little more than
half, the prices asked by women in the
village who were no more competent or

This plan might readily be adopted by
one woman in every country neighbor-
hood, if she be in possession of the tal-
ent necessary to make of it a success,
turning out work that is satisfactory to
her acquaintances. Mrs. Helpful used to
say, laughingly, that she had a perfect
mania for making over old clothes, and
for "makin' somethin' outen nothin'." She
could do it if ever a woman could. She
was indeed a genius and capable, intelli-
gent, well educated and refined. But cir-
cumstances of an adverse nature had
placed her in "unpleasant places," and
among a people to an extent that were
not congenial. But she was not one to
repine and sit idly down complaining at
her "fate." She knew no bounds to her
ambition, and through it she achieved suc-
cess.
ELLA HOUGHTON.

A SUMMER TOILET.

This is of any of the soft silks or lawns.
The waist is quite novel. The revers,
vest and collar should be of white, either
silk or pique.

In any of the light wool etamines this
dress would be quite as cool as lawn. Rib-
bons and lace enter into the combination
of every toilet, and must be used lavishly.

Two and one half yards of lace for the
neck and sleeves are none too much. The
wrinkled sleeve must be made on a thin
lining.

TATTING.

Tatting was very near becoming one of
the lost arts when it was suddenly re-
vived, and now it bids fair to be used once
more for adorning the numberless articles
which are wont to be finished with dainty
lace.

If well made, of good quality, of white
sewing-cotton, it is very durable and with-
stands the ravages of the laundress longer
than woven laces.

As the present-day girl is satisfied with
nothing in the way of work-basket tools
unless they are silver, the tatting-shuttle
of to-day has assumed an elegance un-
heard of in our mothers' time, when they
were perfectly satisfied with one made
of rubber, or at best ivory. They can be
purchased at very reasonable prices.

It is very difficult to learn except from
another person, and then needs only pa-
tience. If the first two patterns are mas-
tered, the others are comparatively easy.
To those who suffer from perspiration
upon the hands I would suggest that they
keep a small flannel starch-bag in
which to dust the hands, as it is impor-
tant to keep the thread so it will pull up
neatly. For a beginner No. 10 thread is
the best to learn with, as the picots can
be better distinguished.

Pattern No. 2 is made with the shuttle,
and a spool of thread from which the loop
around the hand is made, working upon
it with the shuttle-thread. Always hold
the thread loosely in the hand. When a
good length has been made, roll it up care-
fully, and pin a piece of tissue-paper
around it to keep it clean. Its beauty de-
pends upon its absolute cleanliness when
finished.

The picot-edged patterns make very pret-
ty edges for fine handkerchiefs, in which
case No. 60 or No. 70 thread should be
used, and a larger number of stitches. A
young lady friend of mine makes a hand-
kerchief with tatting edge for which she
asks one dollar. She always has six or
more orders ahead.

Tatting is a nice finish for toilet articles
and fine doilies, lending itself particularly
to the adornment of an infant's wardrobe.

Learn carefully Nos. 1 and 2, as these
are the basis of all the other patterns.

No. 2 is called double thread. The top



No. 1



No. 2



HALF WHEEL.



FEATHER EDGE.



CLOVER-LEAF.

authorities. We cannot afford to run the
risk of sickness or death entering our
homes for fear of offending a neighbor by
complaints. It is of the utmost impor-
tance to be sure that the air we breathe
and the water we drink are pure. Not
long since I read of a family that moved
to the country from a large city that they
might have the benefit of pure air. One
after another sickened, and it was only
after the death of two members of the

family that the water in the well was dis-
covered to be contaminated by a neighbor-
ing cesspool. A day seldom passed that some one
did not come for information and help,
and there they remained to dinner, and
usually to "tea" also, while waiting for
Mrs. Helpful to complete the work that
they declared no one could do "so beauti-
fully" as herself. An occasional one of-
fered in return to do a washing for Mrs.
Helpful "some day." But they were very

proficient than herself. She was soon
earning a neat little sum of money every
year. It was but a little time until women
of limited means from the village were
also seeking her services. For her lesser
prices for the same work were gladly ac-
cepted, and they were very glad to avail
themselves of her help in making, plan-
ning, cutting and fitting, and even in dye-
ing goods for the purpose of pressing them
into further service.

part is made by throwing around the hand
a thread from a spool, and working on it
with the thread from the shuttle.

FEATHER EDGE.—This is first three
loops made three double stitches and a
picot. 3 d s. 1 picot. 3 d s. 1 picot. 3 d s.
and close up.

The large loop is 3 d s and 1 picot. 2 d
s. with 1 picot between until you make 10
picots; then 3 d s. and close up.

THE HALF WHEEL is made on one side

of a loop composed of 4 d s, 1 picot, 4 d s, 1 picot, 2 d s, 1 picot, until five picots are made, then 2 d s, and close up. The lower loops are 5 d s, 1 picot, 5 d s, 1 picot, 5 d s, 1 picot, 5 d s; close up. Join at the side of each one, and also to the first loop. When each wheel is finished, carry the thread over the last loop, and join it as you go along. "

THE CLOVER-LEAF is tied closely after each three loops are made. Be careful to leave the connecting thread loose enough to carry over.

LOUISE LONG CHRISTIE.

CONSIDER THE BEE.

Will Shakspeare has painted an idyllic little picture in King Henry V. of the working of the honey-bees:

Creatures that by a rule in nature teach
The act of order to a peopled kingdom.

They have a king, he says, and officers of state, magistrates, merchants and soldiers who "boot upon the summer's velvet buds," and with their pillage merrily march home to the royal tent of their emperor:

Who, busied in his majesty, surveys
The singing masons building roofs of gold,
The civil citizens kneading up the honey;
The poor mechanic porters crowding in
Their weary burdens at his gate;
The sad-eyed justice with his surly hum,
Delivering o'er to executors pale
The lazy, yawning drone.

Will Shakspeare wrote from his own observations, and he was all right except that these soldiers, merchants, masons and magistrates of the hive are all females. The only males in the hive are the "lazy, yawning drones." Handsome, portly fellows, with loud-buzzing voices, they have no stings, no wax-glands, no pollen-baskets, and would starve to death when surrounded with honey if the worker females did not feed them. These working female bees do not consider the male bee who loafs around without visible means of support as any object of love or admiration, and in November, when their usefulness is questionable, they put him to death. The male larva and male eggs are also exterminated at the same time.

There is no difference in the egg producing a queen bee and a working bee except that the queen bee is put into a larger cell and fed on rich food called royal jelly. She is a long, slender creature with a curved sting, which she rarely uses except in mortal combat with a rival queen. It takes ten or twelve days to produce a queen from a worker's larva. Two or three days later, if the sun shines, she goes out on her marriage flight. If she does not secure a mate on the first day, she goes again and again. If she has no luck after fifteen days, she remains a virgin queen.

The work of the queen is to lay eggs, and she may produce three thousand in a day, which would average over a million in her lifetime. Each egg is one sixteenth of an inch in length, and if all the

from three to five years, though a worthless queen is usually put to death.

The workers are the most numerous class in the colony, a good hive numbering from fifteen to forty thousand. The worker larvae are laid in small cells, fed grudgingly, and the first week of their young bee life they are called imagoes.

These imagoes do not go out, but are trained to do general housework at home. They build the comb, feed the queen, the larvae and drones, cap the cells and ventilate the hive. After a week's time they come to the age when they can fly away after honey and pollen and wax, and they find it ever so much more fun rolling over clover-tops drinking in nectar than toiling away feeding lazy drones in the hive.

The mechanism of the worker-bee is very interesting, with her pollen-bag, honey-stomach, wax-plates and curious little hairs for gathering pollen. She is a very neat, orderly creature, and carries with her, on her legs, not only the stiff, horny combs used to gather pollen into her pollen-basket, but fine bristle combs to brush any grains of pollen out of her eyebrows that may obscure her vision,

thread, and draw it through the two remaining.

ROSES.—First row—Make ch of 6 st; join.

Second row—Ch 5, 1 tr in circle of 6, ch 2 and 4 more tr with a ch of 2 between each t c; join. This makes 6 t c and 6 spaces around circle.

Third row—Put 1 d c, 6 t c and 1 d c in each space for first row of leaves.

Fourth row—Make a ch of 4, and join behind the first leaf with a s c. Continue around rose in this way.

Fifth row—Put 1 d c, 8 t c and 1 d c in each chain behind the first row of leaves.

Sixth row—Increase the ch 1 st behind each leaf for every row, and put 2 more st in each scallop until you reach the last row of the thick part of the rose, which has 1 d c, 15 t c and 1 d c. This gives you a rose with five rows of leaves.

LACE-WORK AROUND ROSE.—First row—Make ch 7, join on the top of leaf with a s c; make ch 4, join in same st by a s t; chain of 7 join in the bottom of leaf with a t c, chain of 4 join in same st with s c. Continue around rose.

Second row—Crochet to top of loop 7,



and also to clean and burnish up her wings. The worker-bee never lives to old age, and if she comes out in the busy honey-making season, she may die of overwork in a month.

The busy worker-bees really mother the hive, for they gather the food and chew the wax and knead the pollen into bread, and feed all the baby bees as well as the queen bee and the drones. With bee-glue, which they gather carefully from hickory and horse-chestnut buds, they fasten up every crevice. They plan the cells with mathematical precision, devise ways and means for surmounting all kinds of difficulties with inexhaustible patience, besides storing up tons of honey going to waste in the flowers. Every woman suffragist should wear a bee in her bonnet.

A farmer who planted beehives in his front dooryard pointed to a fine hip-roofed barn on his premises the other day, saying:

"My bees built that barn. They netted me eleven hundred dollars in one year."

That farmer thinks the bee worthy of consideration.

FRANCES BENNETT CALLAWAY.

ROSE TIDY.

TERMS IN CROCHET.—Ch, chain; s c, single crochet. Having a stitch on the needle, put the needle through the work, draw the thread through the work and the stitch on the needle. D c, double crochet. Having the stitch on the needle, put the needle through the work, and draw a stitch through, making two on the needle. Take up the thread again, and draw it through both these stitches. T c, treble crochet. Having a stitch on the needle, take up the thread as if for a stitch, put the needle through the work, and draw the thread through, making three on the needle. Take up the thread, and draw through two, then take up the

make ch of 8, join in next loop of 7, ch 4, join with s c in same st; chain 8, and continue as described around rose. Break off thread. Make 9 roses as described above. Every third loop of rose is crocheted together with a ch of 4 caught on each side of the single st, which joins the roses.

CENTER BETWEEN ROSES.—Ch 6, join; put 17 t c in this circle.

Third row—Ch 5, skip 2 st, confine with s c; continue around, making 8 loops in all.

Fourth row—Crochet to top of one loop; make ch of 6, and put in the top of one of the loops around rose; ch 4, and confine in same st with s c; ch 6, join in top of the loop of 5 chains around the center. Continue in this way until each little loop of 5 is attached to a loop around the roses.

Between each rose on the outside of tidy is a little place that must be filled with a little crochet made in this way:

First row—Ch 4; join.

Second row—Put 11 d c in this circle.

Third row—Make ch 11, skip 1 st, and join with s c; repeat this 3 times, then make ch 6, and join in loop of tidy next to the one that joins the roses together; make ch 4, confine in same st with a s c; make ch 6, and attach to little wheel, skipping 1 st from where you left the little wheel. Repeat this last direction, but attach the ch 6 to the loop on the other rose. You will have to make 8 little wheels, and attach them as described for outside edge.

LACE-WORK AROUND TIDY.—First row—Fasten thread to the top of one of the loops around rose; make ch 8, fasten in the top of next loop; ch 4, confine in same st with a s c; continue in this way, taking up the ch of 11 on little wheels just as you do the loops around the roses.

Second row—Ch 8, fasten in top of next loop; ch 4, confine in same st with st; continue around tidy.

Fringe the tidy with a fringe from two and one half to three inches deep.

You can make these tidies of silk or colored spools of cotton. I prefer the delicate colors of cotton, as the tidies stay nice longer, and the cotton does not ruff up as the silk does. You will have to have three spools of crochet-cotton to make a tidy the size of the one described.

PATTIE HANGER.

A HANDY IRONING-BOARD.

In reply to a number of inquiries we illustrate a handy ironing-board. Fig. 3 shows the ironing-board closed, and Fig. 4 open.

AN APPEAL TO WOMEN.

Do you realize that not less than ten million birds are killed every year to stock the millinery-stores of civilized Europe and America, that you may decorate your hat or bonnet with their feathers?

Do you realize that for every murdered bird there are left at least two young, helpless, starving nestlings to die crying piteously and in vain for food?

Do you realize that insects multiply prodigiously—many at the ratio of one to one hundred thousand or more every year—that if not checked, vegetation would be ruined; that the cutworms alone, to say nothing of the gipsy-moth, are destroying whole crops, and that those ten million birds would have eaten and fed to their young not less than 1,000,000,000,000 insect pests every year? Yet the birds were killed that you might wear their feathers, and sometimes their whole bodies, cured with arsenic, on your bonnets! Millions of sweet notes hushed, and trillions of insects propagated to annoy farmers, horses and cattle! For what? A cruel and wicked fashion's whim.

Do you realize that no musical instrument ever invented can begin to equal the melody of our native warblers, and that within the last ten years 100,000,000 of these sweet songsters have been killed for you? Are you so trivial and cruel as to kill a song-bird for the sake of wearing its feathers?

Mother-heart, do you realize that whole species of plumage-birds have been exterminated, that their bleeding bodies decay in heaps on the coast of Florida, Louisiana and California, and that every egret plume that you wear represents a murdered heron, and is an incentive to your boy or somebody else's boy to cruelty and brutality?

"What does it cost, this garniture of death?
It costs the life which God alone can give;
It costs dull silence where was music's
breath;

It costs dead joy that foolish pride may
live.

Ah! life and joy and song, depend upon it,
Are costly trimming for a woman's bonnet."

Sisters, we have lace, ribbon, silk, satin, velvet and straw; we have silver, gold, steel, glass and jet; we have beads, brass, tinsel and bronze; we have artificial flowers in endless variety—bud, blossom, leaf, spray and fruit; will you not be satisfied

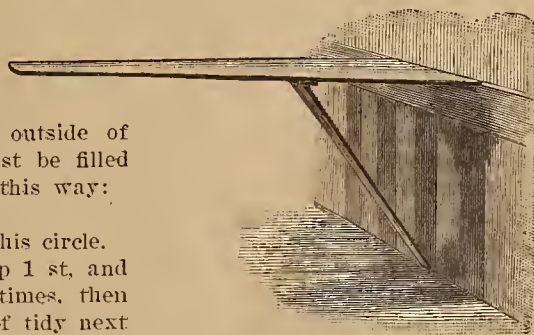


FIG. 4.

with these for ornaments, and resolve from this time to wear nothing on your hat which has cost the life of one of the daintiest, cheeriest, sweetest, most beautiful and most melodious of God's creatures?—Boston Transcript.

About six years ago my sister contracted a severe Cold. She continued to grow worse, and the doctors said she could not recover. She tried Jayne's Expectorant, and kept on with the medicine until she was entirely well.—L. W. MILLER, Dexter, Texas, Oct. 21, 1895.

For the Liver, use Jayne's Painless Sanative Pills.

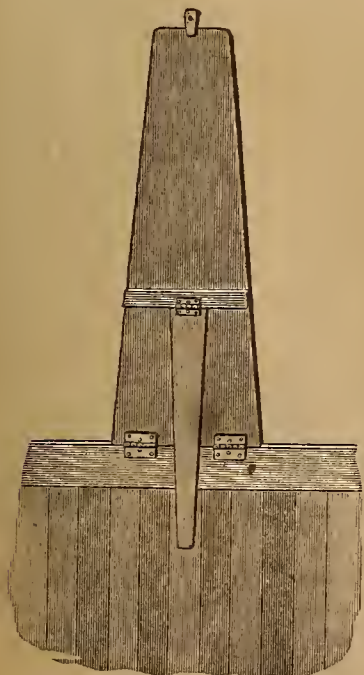


FIG. 3.

eggs a queen bee produces were to be laid end to end they would extend over a mile. From this it will appear that the queen bee is a very busy person. The queen usually begins work very early in spring with unimpregnated eggs, which produce drones. When the drone-brood is well advanced, impregnated eggs bring forth queens and workers. A queen may live

Our Household.

WHEN IS A WOMAN OLD?

This query on my mirror hung:
"When is a woman old?"
It clings to me and long has clung;
The answer must be told.

Ah! some are old before half way,
And some are never old;
For these but laugh life's cares away,
While those both fret and scold.

And yet it is no easy task,
However well controlled,
To answer one if she should ask,
"When is a woman old?"

The graceful ones are still young;
And those alone are old
Who try to make themselves look young
When age has taken hold.

The oldest ones of all the old
Are those who would look young.
For they will always fret and scold
When age's sign is hung.

The old in years who live among
Those younger in their hearts
Will find themselves remaining young
Long after youth departs.

As long as women cling to youth,
And disregard their age,
They never could be old, forsooth,
Their youth fills up the age.

Yes, some are old before their time—
Old age usurps their youth—
And some are young beyond their prime
Unless they hide the truth.

—Washington Post.

AN OIL OR GASOLINE STOVE.

SOME one says these articles and slow starvation go hand in hand, but any one who has tried this way of living through one summer will be loath to give it up and return to the terrors of the coal-bucket.

Experience in this as in everything else is all that is needed to give one the dexterity and deftness of handling which, after all, robs cooking of half its terrors.

The experience at cooking-school which a girl gets under the tutelage of a professor helps to steer her clear of many of the uncomfortable blunders she would make in her home trying to "go it blind."

In the confines of small apartments, which must answer for parlor, studio, bedroom, dining-room and kitchen, it takes considerable art to dispose of culinary articles and smells and waste so as to respect the dignity of the other apartments, and preserve an amount of grace necessary to meet your lady caller who has a whole house at her command and a retinue of servants to do her will.

It may be possible for you to be a lady in your own parlor or a good cook in your own kitchen, but it sometimes approaches the impossible to combine them both in one person and do equal justice to each one. When busy at the kitchen end one can really be forgiven for drawing down the blinds at the other end of the house, and giving a decidedly "not-at-home" look to the house. And when dressed for the parlor end, it is difficult to be called back to the cooking-stove by duties that always assert themselves at meal-time.

Preparation beforehand may insure a cold supper, but this is not always appetizing, and even then entails an amount of preparation almost destructible to any toilet, or else calling for an amount of extra work which to keep up day after day is certainly very fatiguing.

The present-day woman is not as much of a stay-at-home as those of the past, unless she decides to be like the boy on the burning deck, and stick to her self-imposed task, no matter what happens.

Certain it is that even if a meal can be prepared in a perfectly ladylike manner, the cleaning up of the utensils used is quite another matter. They can be left for next morning, if you can brave the comments of your next-door neighbor, or if you have enough dishes and utensils to do for two meals.

By using only fruit, rolls and coffee or tea or milk for breakfast, that meal can readily be disposed of; but dinner and lunch must be something more substantial.

All sorts of palatable dishes can be prepared for the six-o'clock meal. Many canned dainties can be used; and if one chooses, the chief work need be only about the one main meal of the day, be that at noon or night.

If the family is small, it is the best economy to get the heartiest meal out of the house, either at some good restaurant or a boarding-house. It would also be a diversion, and relieve the monotony very much. But where there are children it is scarcely to be thought of. With the aid of a chafing-dish and lamp through the summer, however, a woman's work could be very much lightened in every way, if she could make up her mind to curtail her bill of fare in a way to save herself drudgery. With a large family there seems no way to save work unless all are helpers.

BELLE KING.

FRUIT DESSERTS—RASPBERRIES.

- 1 Raspberries (plain).
- 2 Raspberry Gelatin.
- 3 Raspberry Pie.
- 4 Raspberry Shortcake.
- 5 Raspberry Float.
- 6 Raspberry Pudding.
- 7 Iced Raspberries.

Carefully pick over your berries, freeing them from all undesirable matter, and if necessary wash them lightly in clear cold water with the hands. Pour the water off, and drain well.

Place in the dessert-dish in which you intend to serve them, first a layer of berries and then a slight sprinkling of powdered sugar, and so on until the dish is full. Raspberries, unlike strawberries and blackberries, which contain a certain amount of acid, are quite sweet of themselves, and if too much sugar is added are apt to become insipid and lose their own delicious flavor.

Raspberries served with cream, either plain or whipped, sweetened and flavored, are very palatable.

RASPBERRY GELATIN.—This is a very cooling dessert and an ideal one for summer. Soak a package of gelatin in one pint of cold water one half hour, and add one and one half pints of hot water, and stir until the gelatin is dissolved; sweeten to taste, and flavor with lemon-juice also to taste. Now add about one quart of fresh raspberries carefully prepared for use; set the gelatin away in a refrigerator or other cool place to harden. This dessert should be prepared the day previous to serving, as it requires some little time to harden.

RASPBERRY PIE.—The crust for this pie is baked separately, the berries not being cooked at all. When two crusts are to be used, just before serving the pie fill the under baked crust with ripe, fresh raspberries (carefully cleansed), sprinkle slightly with powdered sugar, and add two tablespoonfuls of thick cream; then place on the top baked crust, and your pie is ready to serve. Or bake but one crust, after which fill same with berries, adding sugar and cream, and then a meringue (as for lemon pie), which, of course, requires a slight browning. Serve hot or cold.

RASPBERRY SHORTCAKE.—Sift together one quart of flour, one half teaspoonful of salt and two heaping teaspoonfuls of baking-powder; rub in well one and one half tablespoonfuls of butter or lard. Roll this crust out rather thick, and bake in a hot oven. Split quickly with a sharp knife into two parts, and butter both well; place on the lower one a mixture of crushed ripe raspberries, a little powdered sugar and a little cream; add a second crust, and also place on same crushed berries, sugar and cream. This can be eaten warm, and is quite delicious.

99⁴⁴/₁₀₀ Per cent
PURE

IVORY SOAP

The snowy whiteness of
linens, lawns, nainsooks
and dimities is preserved
by washing them
with a pure soap.

Some people prefer to use whole raspberries instead of crushing them, in which case only berries and sugar should be placed upon the crusts, and the shortcake should be served cold with iced milk or cold whipped cream sweetened with sugar and flavored with vanilla.

RASPBERRY FLOAT.—This is an exceedingly pretty dessert, as well as a very pleasant one. Crush a pint of very ripe red raspberries with a gill of sugar. Beat the whites of four eggs to a stiff snow, adding gradually a gill of powdered or confectionery sugar. Press the raspberries through a fine sieve to free same from the seeds, and then by degrees beat the same

for further use. As the white of egg drains off remove the berries, and dip them immediately into a shallow pan of powdered sugar, and place in a dish to crystallize. The white of egg may have to be beaten up two or three times during this process. After crystallization has taken place, put the berries into your dessert-dish, and place in a refrigerator or other cool place before serving.

As stated above, the raspberries, being quite sweet in themselves, require little sugar, and while the quantity called for in these recipes will probably suit nearly all, it is possible that some housewives may desire to lessen or increase the quantity, as well as change the various flavors. Tastes vary so greatly that a collection of recipes, though all taken from reliable sources, may not as a whole be a success, while one or more may be well liked in each home.

EMMA LOUISE HATCK.

VERMIN.

CIMEX LECTULARIUS.—Many a housewife is disheartened when she finds that the house into which she has just moved was inhabited before she arrived, and that already her nicely cleaned beds are being occupied. A sure death for such invaders is benzene. It will at once destroy all insect life, and does not injure carpets or furniture. Fill a long-necked can with this fluid and apply it thoroughly in all cracks and crevices where the bugs or their eggs may be. Leave the doors and windows open, and the odor will quickly evaporate. Benzene should be used only in daylight, as it is inflammable, and must not be carried near an open fire or light.

ANTS.—This pest, if disposed of early in the season, will not bother the housekeeper much afterward. Fill up all the cracks where they appear with plaster of Paris wetted with camphor-water, and paper the backs of your cupboard, using strong camphor in the paste. They are often brought into the house in flowers. Keep your shelves dry, as dampness attracts all vermin.

ROACHES.—Sprinkle borax around freely. Keep papers off your shelves awhile.

RATS AND MICE.—A good terrier or cat is the best exterminator of this pest. It is astonishing the damage these things can do in a short time.

VIOLET TRAY-CLOTH.

This handsome design can be used for regular tray-cloth as well as cover for wash-stand, etc. Work the violets in the regular shades and the stems and leaves in green. The edge is best worked in white; the ten short scallops, however, would be very effective worked in fine twisted silk to match the violets.

This design (Premium No. 0750), stamped on fine linen eighteen by twenty-seven inches in size, will be sent to any address for thirty-five cents; silks to work will be sent for fifty cents extra.

HERE'S YOUR SPEC'S



50c buys a pair of Gold Glasses

Warranted to give satisfaction. We sell at wholesale prices and furnish Eye Tester so you can fit your eyes with proper lenses. Satisfaction guaranteed or money refunded. Send for circular which explains fully the quality of the goods, etc.

THE OPTICAL MFG. CO., Springfield, Ohio.

Our Sunday Afternoon.

ESTRANGED.

You are far away from your father's house;
Come back! come home!
You are tired and troubled and hungry and
sad,
Off there alone.
In your Father's house is enough and to
spare,
Come home! come back!
Of love and pity and comfort and care
You shall find no lack.

He loves you—loves you in spite of all;
He will watch and wait;
He will see you coming a long way off,
Though the night be late;
He will greet you, kiss you, fold you close
To his loving breast;
Oh, prodigal! turn from your worthless husks,
Come home and rest!

Come back! come home! for the music lacks
One glad, sweet strain
That shall rise and fall and echo and ring
When you come again.
Soft sandals wait for your weary feet,
And vestures white
To clothe you fully. Oh, swift come home,
Nor wait till night!
—Lillian Gray, in Zion's Herald.

THE SECRET OF THE RELIGIOUS LIFE.

LEARN but one secret, and learn that secret by heart; then you will become transformed and transfigured. Put envy and covetousness under your feet and tread them into the sod. Take your life as you find it, and make out of it the best that materials allow.

No man is alone who is in God's company, and no man's work is of slender importance if he is doing it at God's command and doing it in God's way. You may not be the pendulum which makes the clock ticks as it swings; you may not be the bell whose hammer sends the silvery sound throughout the city; but who dare say that the smallest wheel in all that complicated machinery has not a function on which the completeness and the value of the whole depend? The pendulum ceases to swing and the bell is dumb unless that smallest wheel recognizes its responsibility, and fulfills it.

You may be little, but you can also be great. Grandeur of soul is the prerogative of every man that lives. No matter what your station, the bottom of the ladder up which we climb is within your territory. Nothing that you do is of small consequence. Therefore, do little things with a noble purpose, and nobility of heart and sweetness of life will be your recompense.

You are poor? Well, even poverty has its opportunities. A kindly word is possible. The flowers will grow in your window as well as in the conservatory of the rich, for both depend on the same sunshine. And their perfume will be as grateful to you as to the prince. So good deeds may be planted in the little corner in which you live, and perhaps one of them may shape some young life.

Therein lies the secret of the religious life. It bids you be patient and loyal and honest. It teaches you to love all mankind. And that state of mind, consecrated by the blessing of God, sends forth a thousand magnetic currents which stir nobler feelings in lives of which you have never heard.

Goodness is within reach of all, and goodness is true greatness.—George H. Hepworth.

WHO WERE THE BIGOTS?

Not long since an infidel lecturer visited a town to deliver a series of lectures against the Bible and Christianity. The people of the community took no particular interest in it, and so there was only a fair attendance. The lecturer stood it very well for a night or two, and then began a tirade of abuse of the Christians in the town for their "bigotry" in refusing to hear his arguments against their religion. He made his point good and strong by using the fact that they were unwilling to hear him, and so they must be bigots of the worst kind. When he had finished he gave an opportunity for persons who desired to do so to ask any questions or make any remarks. A gentleman arose and said:

"I would like to know how many infidels there are present, and in order to test the matter I will ask all the infidels present to stand up."

"About fifty arose, nearly all the people present."

"Now," said the gentleman, when they had sat down, "I would like all of those who have risen and said they were infidels, who have attended church in the last five years, to stand up."

Five of them arose, when the gentleman continued:

"Just one tenth of you have been willing to hear both sides, and according to the judgment of the lecturer this evening nine tenths of you are bigots, for you are too bigoted to hear the arguments in favor of Christianity."

He sat down, nothing more was said, and the meeting was dismissed.—Christian Oracle.

A PICTURE.

"Blessed are they that hunger and thirst." Think of the picture that that suggests—the ravenous desire of a starving man, the almost fierce longing of a parched throat. Is that a picture of the intensity, of the depth of our desires to be good? Do we professing Christian men and women long to be delivered from our evils and to be clothed in righteousness with an honesty and an earnestness and a continuity of longing which would make such words as these anything else, if applied to us, than the bitterest irony?

Oh, one lookout over the Christian church and one look into one's own heart, and contrast the tepid, the lazy, the occasional, and, I am afraid, the only half-sincere wishes to be better with the unmistakable earnestness and reality of our belongings to be rich or wise or prosperous or famous or happy in our domestic relationships.—Alexander MacLaren.

AS A LITTLE CHILD.

God knows me better than I know myself. He knows my weakness—what I can do and what I cannot do. So I desire to be led, to follow him; and I am quite sure that he will thus enable me to do a great deal more in ways which seem to me almost a waste in life, advancing his cause, than I could in any other way. I am sure of that. Intellectually I am weak; in scholarship, nothing; in a thousand things, a baby. He knows this, and so he has led me and greatly blessed me, who am nobody, to be of some use to my church and fellow-men. How kind, how good, how compassionate art thou, oh, God! Oh, my Father, keep me humble! Help me to have respect toward my fellow-men, to recognize these several gifts as from thee. Deliver me from the diabolical sins of malice, envy or jealousy, and give me hearty joy in my brother's good.—Norman Macleod's Diary.

IMPERISHABLE.

A writer in the "Central Baptist," speaking of the futility of all efforts to suppress Christianity, says:

"One of the most remarkable features of the history of Christianity is the number of times it has been suppressed by its adversaries. When the stone was rolled against the mouth of the sepulcher, and Roman guards put on watch over it, exultant Pharisees went home to hold a celebration over the final suppression of the new faith. A little later they imprisoned the heralds of the cross, and renewed their celebration. This performance has been going on century after century through all the ages, until one would suppose the skeptics would be ashamed of the repetition. In the face of all our faith flourishes and the ranks of believers multiply every year."

THE MANNA OF THE DESERT.

The manna sent to the Israelites on their journey out of Egypt to the Holy Land is regarded as identical with an edible lichen in Kenner and Oliver's "Natural History of Plants," and the older view that it was the sap of a tamarisk, exuded under the influence of a parasite, is held to be without foundation. Mr. M. J. Tcesdale reviews the subject in the February number of "Science Gossip," and the evidence he brings forward is opposed to the conclusion to which reference has been made. He shows that an exudation from the twigs of the tamarisk (*Tamarix gallica*) has more points of resemblance to the manna of the Israelites than either the edible lichen or the sweet gums exuded by leguminous shrubs, such as *Alhagi maurorum* or *Alhagi desertorum*—both known to the Arabs as camel's-thorn.

Fell to the Floor.

HIS LEGS SUDDENLY GAVE OUT.

Thomas P. Bigg, of Cleveland, Stricken as He was Preparing for a Visit to Friends.

From the Leader, Cleveland, Ohio.

Of the list of the many so-called incurable disorders none has proved to be more of an enigma to the most learned and accomplished physicians than locomotor ataxia, or as it is more commonly known, creeping paralysis. This dread disease has baffled their skill, and they have been forced to admit that they cannot successfully cope with it. All they have been able to do is to mitigate the accompanying pain and suffering; beyond this the science of medicine has been of little or no avail to the many unfortunate who have contracted the dreadful malady, which many people, especially those who are thus afflicted, believe is a forerunner of the grim messenger of death.

Thomas P. Bigg, who lives at No. 1073 St. Clair Street, corner of Lawrence St., Cleveland, O., has been suffering from locomotor ataxia for nearly five years, and nothing but his wonderful vitality has prevented his dissolution long before this.

The malady is directly attributable to his exposure during army life. He enlisted in the Third Regiment Ohio Cavalry in Toledo, and served nineteen months in the volunteer service, and after the close of the rebellion, eighteen months in the regular army. "At first," he said in narrating his experience, "my stomach went back on me, and for six weeks I was laid up in a hospital in Texas. Ever since that time that organ has caused me trouble, and about seven years ago the doctor told me I was suffering from acute indigestion. That was bad enough, but four years ago last July paralysis came on, and I have been using these crutches ever since. The paralysis was in my legs, and it came rather suddenly. I noticed at first that my knees were a little stiff, a sort of rheumatic pain, you know. This quickly developed into paralysis."

"I tried all kinds of remedies, and I tried physicians, but I did not improve. All this time, though, I was holding my own—

wasn't getting any worse. A short time ago I was induced to try Dr. Williams' Pink Pills. I did not expect this last venture would prove any more beneficial than all the others which preceded it. But I am pleased to say I was most agreeably disappointed. Dr. Williams' Pills are simply wonderful. I began to use them two months ago. My legs then were perfectly numb and cold—nothing could warm them. After suffering with paralysis for more than four years, I now experience a comforting feeling of warmth in my lower limbs. I tell you I feel like shouting when I think of escaping from my bondage, and my mind is on the subject pretty much of the time. I intend to continue the use of the pills until my legs are as good and useful as they were in their best days, and I feel that will be soon."

"What effect have the pills had upon your stomach?" Mr. Bigg was asked. "As regards that," said he, "you can readily believe that a stomach which has been seriously out of order for thirty-five years is in bad shape. Nothing used to stay on my stomach, and I was subject to violent fits of hiccoughing. Then I would have to take an opiate to get to sleep. But now I find that food stays on my stomach, though I do not suppose that organ will ever be in first-class shape again. Still I am satisfied to think that it is improved to such a degree, and that I can eat with a feeling of ease."

For six years until a month ago, October, 1896, Mr. Bigg kept a stationery and confectionery store at No. 347 East Madison Ave., directly opposite the Madison Ave. School. He sold out his business and can now be found at any time at No. 1073 St. Clair St.

Dr. Williams' Pink Pills are sold by all dealers, or will be sent post-paid on receipt of price, 50 cents a box, or six boxes for \$2.50 (they are never sold in bulk or by the 100), by addressing Dr. Williams' Medicine Company, Schenectady, N. Y.

\$1.50 SET OF SPOONS FREE

We will give this Set of Six Silver-plated Teaspoons FREE to club raisers for 6 remainder-of-this-year subscribers to Farm and Fireside.

The subscribers may accept any offer in this issue.

In this case the club raiser will be entitled to six guesses in the Missing Word Contest, and each member of the club will be entitled to a guess. See page 19.

Price of this Set of Six Excellent Silver-plated Teaspoons, and Farm and Fireside One Year, Only 75 Cents.

These spoons are made of solid nickel-silver metal all the way through, and then heavily plated with coin-silver. They can be used in cooking, eating, medicines and acids the same as solid silver spoons. These spoons will not, cannot turn brassy, will not corrode or rust, and are so hard they won't bend. Spoons of equal merit are sold in the average jewelry-store for about \$1.50 a set. In beauty and finish they are as fine as solid coin-silver spoons costing \$6.00 a set. For daily use, year after year, nothing (except solid coin-silver) excels these spoons. They are silver color through and through, and will last a lifetime. They are

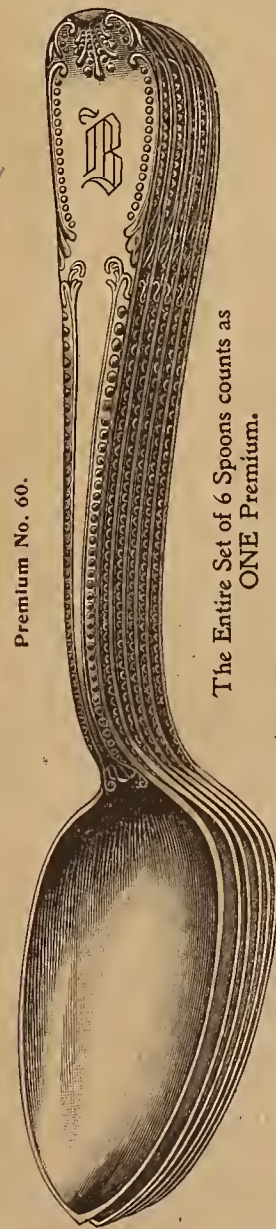
Guaranteed to be as described, and to give SATISFACTION, or MONEY REFUNDED.

INITIAL LETTER Each and every spoon will be engraved free of charge with ONE initial letter in Old English. Say what initial you want.

—WILL STAND ANY TEST

To test the spoons, use a file. If not found as represented, we will refund your 75 cents and make you a present of the subscription. If returned to us we will replace, free of charge, the spoon damaged in making the test, provided you agree to tell some of your neighbors about the test and what it proved.

FARM AND FIRESIDE, Springfield, Ohio.



Premium No. 60.

The Entire Set of 6 Spoons counts as ONE Premium.

Postage paid by us in each case.

Notice to June Contestants.

The names of the prize-winners in the JUNE contest will be announced in the July 15th issue of FARM AND FIRESIDE. This issue goes to press on the twenty-first day of June, and as the June contest does not close until June 30th, it is, of course, impossible to give the names of the prize-winners. The circulation of FARM AND FIRESIDE is so extensive that we have to begin printing it about ten days ahead of the date of issue in order that all subscribers—no matter whether they live in Ohio or California—will receive it on about the same day.

PUBLISHERS FARM AND FIRESIDE.

Our Miscellany.

MOORISH women never have a birthday. It is a point of honor with them to ignore the anniversary altogether, lest they should seem to grow old.

CONDUCTORS of the C. H. & D. and B. & O. S. W. Railways and Big Four Route have been instructed to refuse to accept mileage tickets of the Columbus, Hocking Valley and Sandusky Railway after June 9th.

THE queen of Deumark, in her seventy-sixth year, is one of the finest harpists in the world. A thoroughly accomplished musician, she assists in trios of which the other two parts are taken by professionals of high standing.

TO LACE-MAKERS: Contributions of lace-work and embroidery are purchased at good prices for Barbour's Prize Needlework Books. Send 10 cents for No. 5, full of charming new patterns. Barbour Bros. Co., Needlework Dept., K. 218 Church St., N. Y.

THE newsboys in a certain quarter in London are encouraged to save a penny a day. The money is kept for them in a savings bank, and the boy who deposits regularly for a month is given one penny interest on his money. The bank is the work of a good woman.

ATTENTION of our readers is called to the advertisement of Whitman's Celebrated Hay Presses, manufactured by the Whitman Agricultural Co., of St. Louis, Mo. Their presses are made to run by belt or horse power, and they guarantee them to be more rapid, powerful and durable than any press now on the market. This old and reliable firm has recently erected a very extensive and complete plant for manufacturing their several specialties, enabling them to fill all orders promptly. Write them for special catalogues of their several lines of farm machinery, and be sure and mention this paper when you write.

THE dowager queen of Portugal is probably the best-dressed woman in Europe. She is tall and elegant, has a wonderful grace of manner, which recalls that of her father, Victor Emanuel, and, like him, devoted to sports of all kinds.

4th OF JULY EXCURSIONS.

July 3d, 4th and 5th, at one fare via the Nickel Plate Road.

THE eight flowers most prized by the Japanese are the morning-glory, apricot, cherry, wistaria, peony, iris, lotus and chrysanthemum.

CREAMERIES IN SOUTH DAKOTA.

During the past two years the creamery industry has grown from a small beginning until at the present time there are one hundred and nineteen (119) creameries and cheese factories scattered over the state, and all doing well.

Four times as many creameries are needed in South Dakota, and farmers or dairymen desiring free list showing where creameries are now located, together with other information of value to live stock growers and farmers generally, will please address GEO. H. HEAFORD, General Passenger Agent, C. M. & St. P. R'y, 410 Old Colony Bldg., Chicago, Ill.

REMEDY FOR INSECT STINGS.

It is well known that liquid ammonia relieves the effects of the stings of bees. A correspondent informs us that a much more effectual antidote is the mixture known as ammoniated tincture of quinine. On several occasions, when stung by bees, he found that the quinine mixture would give much quicker and greater relief than ammonia alone.

ONE FARE TO MINNEAPOLIS.

July 3d and 4th, via the Nickel Plate Road, because of Elks' excursion.

TALL BUILDINGS IN ANTIQUITY.

That even tall buildings are not modern ideas is shown by Professor Lonciani in the "North American Review." In Rome much the same tendency was shown to erect tall buildings as has been experienced of late years in America. They had not steel construction to aid them or elevators to land their tenants on upper floors, yet the desire to build lofty buildings was strong upon them, and successive emperors issued edicts limiting the height of houses, seventy feet being allowed by Augustus on the street front, but these regulations were repeatedly violated. With our facilities for iron or steel construction and the knowledge of elevators the Romans would doubtless have matched us in "sky-scrapers." As it was, these ancient houses were often a hundred feet high. The Romans were great builders, and their speculators in this line would without doubt match ours in utilizing every inch of space without regard to light and air. Tenement-house reform would have had in those early days a wide field to work in. Whatever else may be said of their Caesars, it must be recognized that they had an eye to the health and comfort of the common people, and used their efforts to check such buildings.

CRIPPLE CREEK INVESTMENTS.

Big fortunes have been made by a small investment in Cripple Creek stocks, and the way many have suddenly acquired wealth would make interesting reading. We can not here go into details, but if you will write us we will suggest a plan that will materially improve your pecuniary condition. We have something special to offer, and it will cost you nothing to send us your name and get on our list for Cripple Creek literature. Our facilities in the stock business are unexcelled. Address The Mechem Investment Company, Colorado Springs, Colorado.

THE HAIR.

It is pretty generally known that straight hair is due to the lead-pencil-like roundness of the individual hairs, while curly hair is composed of flat, separate hairs that warp together after the manner of shavings. Another fact regarding the structure of the separate hairs was recently revealed by a close microscopic examination. The long, uncut, frayed or split ends were discovered to be prehensile filaments, and when kept long enough in position against the skin these took thrifty root, forming loops on the throat of a microscopist who made himself the subject of the experiment.

EXCURSION TO NASHVILLE VIA C. H. & D. RY.

For the Tennessee Exposition, which opened at Nashville May 1st and continues until October 31st, agents of the C. H. & D. Ry. will sell excursion tickets. Persons desiring to go to Nashville will be furnished full information regarding time of trains, etc., on application to agents of the C. H. & D. Ry.

BUTTER MONEY FOR ARMENIA.

The Wellesley College girls are not content merely to drop a tear for suffering Armenia. They have agreed to do without butter for a month if the faculty will give the butter money to the cause of Armenia. This should net a good sum, and tastes of sacrifice.

AN AWFUL SUFFERER.

If there is any disease which is awful in its effects upon the sufferer, that disease is Asthma and Hay Fever. Suffocating, gasping for air, and sitting up, perhaps for weeks in an agony of despair, weary, worn and helpless, such is the life of one who is afflicted with Asthma or Hay Fever in the worst form. An explorer on the Congo River in Darkest Africa, some years ago, discovered a never-failing cure in the Kola Plant. And now, all over Europe, physicians are endorsing and prescribing the Kola Compound as the only constitutional cure for Asthma and Hay Fever. There are seven thousand recorded cures within three months. Many sufferers give grateful testimony of the curative powers of this remarkable plant. Mr. Wilson P. Moulton, a leading carriage manufacturer of Providence, R. I., testifies that it cured him of Asthma of 23 years' standing. Mr. Alfred C. Lewis, Editor of the "Farmers' Magazine," of Washington, D. C., and Rev. J. L. Combs, of Martinsburg, West Va., give similar testimony, the latter stating that he had suffered from Asthma for nearly thirty years, could not lie down at night in Hay Fever season for fear of choking, and was promptly cured by the use of the Kola Plant. Many others speak in similar terms of this new potent curative. So sure are the importers of Kola of the fact that it cannot fail to cure, that they are sending out large trial cases free to any sufferer who makes the request. For the benefit of our readers who may be afflicted, we cheerfully give the address of the Importing Company, who have given this great boon to humanity. Address, Kola Importing Co., No. 1166 Broadway, New York, and they will send you a Large Trial Case, free, by mail, and prepaid.

Recent Publications.

CIRCULARS RECEIVED.

Kohn Bros., Chicago, Ill. "From Fold to Salons," a handsomely illustrated booklet on wool and clothes. Most of the illustrations are reproductions of famous paintings. Sent free on application.

A. H. Barber & Co., 229 South Water street, Chicago, Ill. Illustrated pamphlet on "Artificial Refrigeration and Ice-making for Creameries, Markets, Hotels, etc."

John H. Jackson, Albany, N. Y. A valuable treatise on "Benefits of Drainage, and How to Drain," with descriptive price-list of drain-tiles and draining-tools.

THE DOCTOR'S WINDOW

Poems by the Doctor, for the Doctor, and about the Doctor.

Edited by

INA RUSSELLE WARREN.

Introduction by

WILLIAM PEPPER, M.D., LL.D.

The compilation of this collection has required two years and it contains nearly every poem of importance on the subject in the English language, including: Armstrong's "Art of Preserving Health," Garth's "Dispensary," Henley's "In the Hospital," Dr. Holmes' "The Morning Visit," and "Rip Van Winkle, M.D.," Riley's "Doc Sifers," Carleton's "The Country Doctor," and "The Doctor's Story," Eugene Field's "Doctor Rahelais," and "His Pneumogastric Nerve," Peck's "Bessie Brown, M.D.," Whittier's "To a Young Physician," and about seventy-five other standard poems. It also includes a number of powerful poems never before published. Nearly every phase of the physician's life is introduced, both grave and gay. The book will go through the press under the direct supervision of the editor, and will be printed with large, open-faced type on heavy linen paper, will be royal octavo in size, 7x9 1/4 inches, and illustrated, making a volume of over 240 pages. The bindings will be in library style, uncut, gilt top. Price, in cloth, \$2.50; full morocco, \$5.00.

AGENTS WANTED.—As the canvass is confined to the medical profession, it is inexpensive and very profitable.

For further information address the publisher, CHARLES WELLS MOULTON, BUFFALO, N. Y.

Don't Stop Tobacco

Suddenly, to do so is injurious to the nervous system. Baco-Curo is the only cure that cures while you use tobacco. It is sold with a written guarantee that three boxes will cure any case, no matter how bad. Baco-Curo is vegetable and harmless; it has cured thousands, it will cure you. At all druggists, 50 cts. and \$1 per box; 3 boxes, \$2.50. Booklet free. EUREKA CHEMICAL & MFG. CO., La Crosse, Wis. Mention this paper.

17c. PER ROD Is all it costs to build the best Woven Wire Fence on earth with our Automatic Machine. We sell the Famous COIL SPRING WIRE CATALOGUE FREE. KOKOMO FENCE MACHINE CO., Box 67, Kokomo, Ind.

Mention this paper.

A \$2.00 monthly payment for ten months will secure you 100 shares in a dividend-paying British Columbia Gold Mining & Developing Company. You are almost sure to double your money and have a permanent income. The mines are in active operation, yielding handsome returns. Only one hundred thousand shares to be allotted, therefore it is necessary for you to remit promptly. Pass books furnished, prospectuses forwarded and references given. Address W. FULLERTON, No. 26 Melinda Street, TORONTO, CANADA. Mention this paper.

600 Second Hand BICYCLES to close out. All makes. GOOD AS NEW, \$5 to \$15. NEW, HIGH GRADE '96 Models, fully guaranteed. \$18 to \$24. '97 Models \$20 to \$30. Shipped anywhere on approval. Special Clearing Sale. **EARN A BICYCLE** by helping advertise us. We will give one in each town FREE. Use of sample wheel to introduce them. Write at once for our Special Offer. E. F. MEAD CYCLE CO., Wabash Ave., Chicago, Ill. Mention this paper.

COLUMBUS 1897 BICYCLES for \$27.50 while they last; only limited number. Judson A. Tolman, 282 Wabash, Chicago.

CONTEST CLOSES JULY 31.

Don't delay in sending your guess in the missing word contest. Remember that the 4 \$100 bicycles are given for the first correct answers, but EVERY ONE who guesses the missing word gets a very fine book. For a description of the bicycles write to the National Sewing Machine Co., Belvidere, Ill. See page 19 for full particulars.

4 BICYCLES FREE.... TO FARM AND FIRESIDE OLKS

On page 19 will be found the full particulars of our Missing Word Contest for July. How many can guess the missing word in the following sentence? "The inhabitants of our country have lately had a useful lesson on this subject." Try it. If you guess it you will get a very fine book, and if you guess it first you will get a bicycle free. See conditions and particulars on page 19.

Each contestant must accept some of our subscription offers in either this or previous issues of Farm and Fireside. The guess must be sent in the same envelop with the subscription. Below are some very liberal offers.

SUBSCRIPTION BARGAINS....

For 25 CENTS we will send this paper for the REMAINDER of this year and any ONE of these six premiums:

Prem. No. 801. ROBINSON CRUSOE Prem. No. 802. PILGRIM'S PROGRESS
Prem. No. 17. STANDARD COOK BOOK Prem. No. 820. HORSE BOOK
Prem. No. 27. HISTORY AND MAP OF CUBA. Prem. No. 816. POULTRY BOOK

For 30 CENTS we will send this paper for the REMAINDER of this year and any ONE of these five premiums:

Prem. No. 411. FIVE GERANIUMS Prem. No. 410. SIX TEA-ROSES
Prem. No. 640. CRIMSON RAMBLER ROSE Prem. No. 63. THE ARTS OF BEAUTY
Prem. No. 11. THE PEOPLE'S ATLAS Prem. No. 26. GEMS FROM THE POETS

For 35 CENTS we will send this paper for the REMAINDER of this year and any ONE of these five premiums:

Prem. No. 7. LIFE OF WASHINGTON Prem. No. 15. LIFE OF LINCOLN
Prem. No. 100. CHRIST BEFORE PILATE Prem. No. 30. BEAUTIES AND WONDERS OF LAND AND SEA
Prem. No. 11. THE PEOPLE'S ATLAS

For 40 CENTS we will send this paper for the REMAINDER of this year and either ONE of the following premiums:

Prem. No. 180. BERRY-SPOON Prem. No. 34. SAMANTHA AT SARATOGA

Each and every premium guaranteed to give entire satisfaction or money refunded. Postage paid by us in each case.

Address FARM AND FIRESIDE, Springfield, Ohio.

Queries.

READ THIS NOTICE.

Questions from regular subscribers of FARM AND FIRESIDE, and relating to matters of general interest, will be answered in these columns free of charge. Querists desiring immediate replies, or asking information upon matters of personal interest only, should inclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query, in order that we may answer by mail if necessary. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

Sand-vetch.—W. L. D., Squireville, Mich. You might experiment with sand-vetch on a small scale and find out its value for your soil and climate.

To Kill Moles.—M. J., Auglaze, Ohio. Moles may be caught by mole-traps, which you can obtain through a dealer in hardware, or they may be killed by bisulphid of carbon. Cut across the runway; into each opening put a ball of old rags, waste, etc., saturated with this liquid, and close up the openings firmly with earth.

Calf-weaners and Sucking-cow Muzzles.—H. H., Northfield, Kan., and J. T., Zanesville, Ohio. Cheap, effective devices for preventing calves and cows sucking themselves or each other are listed in the catalogue of the Dahymen's Supply Company, Philadelphia, Pa. Do not resort to the cruel, unnecessary method of splitting the tongue.

To Get Rid of Burdock and Sourdock. N. J. R., Thornton, Ind., writes: "How can one get rid of large patches of burdock and sourdock?"

REPLY:—Mow them off with a brush-scythe before they go to seed. Then plow the land and kill the roots by thorough cultivation. If the patches are not too large, grub out the roots, or cut them off below the crown.

Pickling Cucumbers.—L. C. T., Corry, Pa., writes: "Can you or some of the readers of FARM AND FIRESIDE give me a good recipe for making and barreling sweet cucumber pickles, such as we buy from stores, that remain firm and hard?"

REPLY:—Some pickle recipes will be given later. Perhaps some readers may be able, also, to give the desired recipe for making sweet cucumber pickles.

Tomato Enemies.—D. D. R., Brewton, Ala., writes: "Please inform me about the small lice on my tomato-plants, also the early decay of the fruit. Sometimes it begins to rot as soon as the tomato is out of the bloom. Do the parasites cause the rot? What is the cause and preventive of both?"

REPLY BY T. GREINER:—The tomato-rot is a fungous disease for which no sure remedy or even preventive is known. Practice strict rotation. For any insect that sucks the juices of the plant—plant-lice or whatever they may be—spray the plants thoroughly with kerosene emulsion.

Preserving Entomological Specimens.—In reply to an inquiry on this subject Professor James Troop writes: "The usual method of preserving adult insects is to pin them, using the regulation insect-pins, and putting them on a drying-board for a few days until they are thoroughly dried. They may then be put into a cabinet case. Butterflies and moths should be pinned through the center of the thorax, then stuck on the pressing-board and the wings spread to their natural position and fastened there, leaving them in this position for four or five days. The wings will then stay in this position. Beetles or the hard-winged insects should be pinned through the right wing-cover. All other insects are pinned through the thorax."

Plant-lice.—Mrs. D. D. B., Owego, N. Y., writes: "For the past two seasons plant-lice came on my sweet-peas just after they had nicely commenced blooming, completely ruining them, the stalks being completely covered with the mites from the ground up, and so minute that for a long time I thought them to be rust, until viewed through a microscope. Would it do to sow sweet-peas on the same ground this season?"

REPLY BY T. GREINER:—Nobody can predict about the coming or going of plant-lice any more than about the weather. I would not hesitate to plant sweet-peas on the same ground again. If lice do appear, you can spray the plants with tobacco-water or kerosene emulsion, or sprinkle tobacco-dust over them. In the garden department you will find answer to your questions about weevil. Bisulphid of carbon can be had at any drugist's. It is in liquid form, and ready for use. Keep it rods away from lighted lamps or fires. Place the peas or beans in a closed vessel (box, barrel, kettle, etc.). Put a saucer or saucer-dish on them, and pour a tablespoonful (more or less, according to quantity of peas or beans) of the bisulphid into it; then quickly cover the vessel tightly. Leave covered for twenty-four hours.

A list of Country Homes along the South Shore of Lake Erie open to Summer Boarders will be mailed to any one inclosing a two-cent stamp to B. F. Horner, General Passenger Agent of the Nickel Plate Road, Cleveland, Ohio.

VETERINARY.

Conducted by Dr. H. J. Detmers.

To regular subscribers of FARM AND FIRESIDE, answers will be given through these columns free of charge. Where an immediate reply by mail is desired, the applicant should inclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Subscribers may send their veterinary queries directly to Dr. H. J. Detmers, 1315 Neil Avenue, Columbus, Ohio.

NOTE.—Parties who desire an answer to their inquiries in this column must give their name and address, not necessarily for publication, but for other good reasons. Anonymous inquiries are not answered under any circumstances.

Ear Ailment.—G. F. M., Salem, Va. If you cannot describe the "ear ailment" of your horse I have no means of knowing what it is or may be. Have the horse examined by a veterinarian.

A Sick Calf.—F. W. B., Gratiot, Wis. From your description I have to draw the conclusion that your calf has, at any rate, a badly diseased liver, and probably will have died before this reaches you.

Loses Her Milk.—J. M. G., Upper Alton, Ill. If your cow, which probably is a good milker, loses her milk, but not until nine or ten hours after milking, the remedy is an easy one, and consists in milking three times a day, at least as long as the cow is in "full milk."

Not Level-headed.—W. C. P., Canver, Fla. If your hog staggers and carries one side of its head lower than the other, first ascertain the cause by a careful examination, and if then you find that the cause can be removed, remove it. If not, let it go or butcher the hog.

Failed to Come in Heat.—C. J. M., Lordsburg, Ohio. If your heifer, which calved last October, has not yet shown any symptoms of being in heat, the best you can do is to send her to a pasture in which she has the company of a bull, and to leave her there three or four weeks.

Looks Like Rheumatism.—W. H. W., Morenci, Mich. What you describe looks like rheumatism, but as rheumatism pure and simple is comparatively rare in horses, I advise you to have the horse examined, and if the prognosis is not too unfavorable, also treated by a veterinarian.

Probably Blind in One Eye.—A. F. S., Rogersford, Pa. Blindness in one eye sufficiently accounts for the tendency of your horse to press to one side when driven. This will continue until the eyesight of the left eye is restored, if that is possible, or until the eyesight of the right eye, too, is destroyed. Train her to work on the off side in the team.

Water-spaniel.—P. H. S., Ross Station, Col. There is no earthly reason why a young water-spaniel or any other young dog should not receive any meat, provided, of course, the meat is sound and clean and not from a diseased animal. On the contrary, I regard meat, and particularly bones, as very beneficial to young dogs. Dogs are naturally carnivorous animals.

Old Sores.—D. S., Richmond Furnace, Pa. You will find that any attempt to bring such old sores as you describe, and which the animal, now fourteen years old, had already when a colt two years old, will be in vain, or, to say the least, a non-paying business. All you can do is to keep them clean, and to work the animal, which is probably worthless, as long as it can be done without cruelty.

Thorough-pin.—J. W., St. Joseph, Mo. It is not exactly impossible to remove a thorough-pin of two years' standing, but the treatment is tedious and the result at best uncertain; besides this, the thorough-pin is apt to make its appearance as soon as the causes which originally produced it are acting again. Further, as a thorough-pin does not cause any lameness, it is hardly worth while to make an attempt to remove it.

Retention of Urine—Puerperal Paralysis.—J. G., Giddings, Ohio. The retention of urine, from which your cow now and then is suffering, appears to be caused by some obstruction to its passage in the bladder, probably produced by the presence of a stone or concrement. Have your cow examined by a competent veterinarian, who, if he finds what I expect he will find, may be able to remove the stone or concrement by a surgical operation.—The cow of your neighbor died of puerperal paralysis, or so-called calving-fever.

Pressure Upon the Brain.—S. C. C., Fillar, Ark. The sleepiness and the disturbance of the functions of the digestive and other organs of your mare are caused by pressure upon certain parts of the brain, which pressure probably results from the presence of exudates deposited when the animal was overheated, and never removed since. You will find that the animal is worse in hot and sultry weather and a little better when the weather is cool or immediately after a diarrheic spell. There is no prospect of recovery.

Kafir-corn—Hidebound.—J. O. S., Canon City, Col. I cannot tell you anything about the feeding of Kafir-corn and its effect upon horses.—"Hidebound" is a term applied to a condition of great poverty in domestic animals resulting either from starvation or from the existence of chronic morbid changes seriously interfering with the process of nutrition. If mangle constitutes the cause of such a condition, then it is evident that the disease is inveterate in the highest degree and of long standing, and it will be by far the cheapest to destroy the animal.

Swine-plague.—A. N. W., Harris, Iowa. What you describe is swine-plague, or so-called hog-cholera. There is no cure, especially if the whole herd is already infected or diseased. The disease can be prevented in two different ways: First, by destroying and warding off the infectious principle, which, unfortunately, is but seldom possible; and secondly, by destroying the existing predisposition of all the animals to be protected by means of a protective inoculation. Of course, both means of prevention are effective only if applied before any infection has taken place.

A Defective Teat.—M. D., Chelmsford Centre, Mass. If only one teat of your cow retains the milk for two hours after milking, and you desire to save the milk, the simplest way would be to milk every two hours until the sphincter of the teat has gained sufficient contractility. If this is too much trouble, you may try a rubber nipple without an opening and pass it over the end of the teat. How long a cow should be dry before calving depends a great deal upon circumstances. On an average, it should be between six weeks and three months. Your other questions do not belong to my department.

Goiter.—F. R. H., Jefferson, Ohio. What you describe is a case of enlarged thyroid glands, or so-called goiter. The enlarged glands can be removed by a surgical operation; but as the enlargement seldom does any perceptible damage, and as the operation, even if performed by a skillful surgeon, is not without danger, I cannot advise to have it performed. In some cases a reduction is effected by external applications of iodine, either in the shape of tincture of iodine, or as an ointment composed of iodide of potassium, one part, and lard, six parts. The applications, made once a day, must be continued for several weeks.

Bitter Milk.—J. W., Newton, Ill. Bitter milk, which frequently also has a bad smell and does not yield any butter, may be the product of different causes. The most frequent cause, it seems, consists in defective and spoiled food, such as rotten garden truck and vegetables that have been frozen, diseased potatoes, oat and pea straw, etc.; but as you say that the food given to your cow is good and consists of tame grass in a pasture, and twice a day some corn and bran, the bitter ferment, in your case, it seems, must enter the milk after it has been drawn, possibly in the room where the milk is kept. If such is found to be the case, the remedy would consist in a thorough cleaning, ventilating and disinfecting of that room and of the milk and cream vessels, etc.

Tympanitis.—W. M., Saybrook, Ill. You are right—it is the juicy clover that causes the tympanitis (or bloating). Of course, nothing serious might happen if the cows were not so terribly greedy and knew when to stop eating; but as they, being natural gluttons, do not, the best thing you can do, if you have no other pasture than the clover-field, will be to keep the cows shut up over night in a yard, perhaps, and then in the morning keep them shut up until the dew is from the grass, and feed them first some dry hay before you allow them to go into the clover-field. With a good supply of hay in the stomach the cows will be less greedy, and as it is principally the wet clover sent hastily into an empty stomach that is subject to fermentation, all danger will thus be avoided.

Epileptoid Fits in Calves.—W. F. B., Boulder, Col. What you describe appears to be epileptoid fits. In epileptic fits (genuine epilepsy) the cause is supposed to consist in a morbid irritation of certain parts of the brain, the "Pons varolii" and the medulla oblongata, but epileptoid fits, or fits resembling those of epilepsy, can be produced by various causes; for instance, textural diseases of the skull, of the brain and its membranes, an anemic condition of the brain and the presence of parasites in that organ, intestinal worms (particularly Pentastomum taenoides in dogs), and, according to Lustig, the existence of an aneurism in the abdominal aorta. In all these cases the treatment must consist in a removal of the cause. Therefore, a cure is possible only where the causes can be ascertained and be removed.

So-called Black-leg, or Symptomatic Anthrax.—C. H. B., Steele, N. D. There are only two means of preventing so-called black-leg, black-quarters, or symptomatic anthrax; namely, to keep the susceptible animals away from all such places in which the disease makes its appearance, or to inject a small quantity of a pure culture of the bacilli of the disease directly into a vein of the animal to be protected. If your veterinarian wants to inject the culture into the connective tissue, he simply does not know what he is doing, and he surely is no bacteriologist, for such an injection, or inoculation, will produce the disease instead of preventing it, as has been demonstrated by the "vaccination" of the two calves of your father, which died within forty-eight hours after the vaccination, and which had become infected by the inoculation. If through the blunders of your veterinarian not any more animals have been killed, it is simply due to the fact that the dose inoculated was too small to cause fatal results. That your veterinarian does not know the character of the disease—black-leg—is sufficiently demonstrated by his attempt to prevent black-leg, or (as the French call it) symptomatic anthrax, by an inoculation with Pasteur's anthrax vaccine, notwithstanding that both diseases are entirely different; and not only that, but the bacteria which produce them also show wide differences as well in form, requirements and propagation as in their action upon the animal organism. The bacilli of anthrax (the charbon of the French) are found in immense numbers in the blood, while those of black-leg are not in the blood, but in the connective tissues, where the destruction and decomposition is going on, and also in the gall and the contents of the intestines. In former times, before the nature of both diseases was known, black-leg was looked upon as a (emphysematic) form of anthrax, but that time belongs to the past.

Lame Cow—Too Many Incisors.—A. S. B., Rosebud, Ala. Examine the cleft between the toes of the lame foot of your cow, and you will probably find the cause of the lameness. If you find a sore there, as you most likely will, clean it thoroughly, remove all decayed tissue, but especially all decayed horn, by means of a sharp hoof-knife; then dress the sore with absorbent cotton saturated with a mixture of liquid subacetate of lead, one part, and olive-oil, three parts, protect the foot thus dressed by means of a suitable bandage, and keep the animal on a level, dry and clean floor. Renew the dressing twice a day.—You say your seven-year-old horse has seven or eight incisors in the upper jaw. The trouble is the mouth of the horse, when the latter was four and one half years old and about to shed the temporary corner incisors, was not watched, and the permanent corner incisors, owing probably to a somewhat irregular development, did not come behind the milk, or temporary teeth, but somewhat above them, and thus failed to cause an absorption of the roots of the latter and to effect their expulsion. If the mouth of the horse had been watched, the trouble would not have es-

caped observation, and the whole thing could have been adjusted by a removal of the temporary incisors. It may be that some improvement can yet be effected by pulling the temporary teeth, which, according to your description, must be the ones which in your drawing you have designated as No. 1 and No. 6, while those you have designated as Nos. 7 and 8 undoubtedly are the permanent teeth. If you desire to have any of the incisors pulled, have it done by a competent veterinarian, and do not attempt it yourself, because if you do, you will be apt to do much more damage than good. As long as the superfluous teeth do not seriously incommode the horse, I, in your place, would leave them alone. It will be different if they cause trouble or if they are getting loose.

Colic.—M. G. R., Elroy, Wis. Your horse died of colic, and perhaps of too much medication. It is utterly impossible to prescribe in advance for cases of colic, because in every special case the treatment has to be adjusted to the peculiarities of the same. Therefore, as space and time will not allow to write a long treatise in which nearly all possibilities are taken into consideration, I can only give a few rules: 1. In all severe cases of colic a veterinarian should be called as soon as possible. 2. In all cases of colic in which the respiration is much accelerated no fluid medicines should be given, and where the respiration is not, or not much, accelerated, usually no medication is required. 3. If a colic patient is very unruly, a place for rolling, etc., with abundant bedding—straw, for instance—and in which there is nothing on which the unruly animal can injure itself, should be provided. 4. If there is no peristaltic motion to be heard in the abdominal cavity, a good physic—an aloë pill, for instance—is indicated, and in many cases also an injection of warm soap-suds into the rectum, provided the latter is carefully administered, are advisable. There are yet other physicks which act much quicker than aloës, but they are too dangerous to intrust their administration to anybody but a competent veterinarian, and injudiciously used may do an immense amount of damage. 5. Gentle friction applied to the abdomen is admissible in almost every case in which the horse is not too unruly. 6. As a rule, as long as the pulse is lower than sixty beats in a minute there is no danger, and the less medicines are given, the better it will be; if the pulse runs over sixty and up to eighty beats in the minute, the case is more serious, and if a veterinarian is available, he should be called; if the pulse goes up to above eighty, the case is dangerous, and the treatment should be intrusted to nobody but a good veterinarian; and where it runs above one hundred beats in a minute, it will not be necessary to call anybody, because the animal will die. It is true, in many rural districts no good veterinarian is available, because in such often thinly settled districts the veterinary practice is too unremunerative to induce any veterinarian to settle there, especially where the farmers are in the habit of not calling on a veterinarian until the case has been caused to become desperate beyond redemption by their own irrational treatment. This is especially the case in attacks of colic, in regard to which it is perfectly safe to say that more than twice as many deaths are produced by irrational treatment than by the morbid process itself, even if left without any treatment whatever.

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If you have rheumatism, try that simple remedy which cured me. Trial package and other information free. Address John A. Smith, Dept. H, Milwaukee, Wis.

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OPIUM HABIT AND DRUNKENNESS
Cured in 10 to 20 days. No Pay till cured. DR. J. L. STEPHENS, Lebanon, Ohio.

What is the Missing Word?
SEE PAGE 19.

Smiles.

THE THREE AGES OF MAN.

I.

He swore that for true love he'd marry;
In a cottage he'd much rather tarry,
With his love by his side,
Than take for his bride
A girl who had millions to carry.
He was twenty.

II.

Years passed; he was thirty and single;
In society's gay whirl he'd mingle.
He had loved half a score;
He was loving once more.
A lass? No. Her coin's golden jingle.
He was thirty.

III.

A bachelor still, the old sinner
Met a maiden and tried hard to win her;
Not because she was fair
Or had money to spare,
But—because she could order a dinner.
He was forty.

—What to Eat.

SHE WOULD RUN NO RISK.

FRANK, dear," said the sweet young girl, "you give your last bachelor dinner to-morrow night, do you not?"
"Yes, precious, I do."
"Such occasions are usually very merry, even boisterous, are they not?"
"Yes, sweetheart; but you need have no fear about me."
"Oh, that's all right; but there is one thing I want you to do, Frank."
"Name it, darling."
"Before you go to that dinner I wish you to place in my hands enough money to pay the clergyman and defray the expenses of our wedding journey."—Judge.

THE SPREAD OF CIVILIZATION.

The aged Hottentot sat fanning himself beneath his favorite palm-tree.
"Surely, my daughter," he remarked to a pretty but somewhat discontented young woman beside him, "that little frock of fig-leaves of yours is just as cool and nice a get-up as any one could wish. Now, isn't it, dear?"
"Oh, pshaw! Get out!" cried his companion, petulantly. "I'm tired of your old frocks and fig-leaves. I want something new and chic—I want a pair of bloomers, and I'm going to have them, too!"—Truth.

KNEW THE LANGUAGE.

School visitor (after the teacher's prize pupil, little Johnny, has recited at race-horse speed his favorite piece beginning, "At midnight innes scared tenth the Sturk-was derannof thourwen Greaserknee nsuppliance bentshd tremblat spower!")—"An unusually bright scholar, Miss Rushem; yes, indeed, it is a pleasure to hear him. I didn't know you taught the ancient Gaelic in this school, but I am pleased to see that you do and that your pupils are making such rapid progress in it."—Truth.

MODERN ORTHODOXY.

New pastor—"As I understand that there were some complaints as to the orthodoxy of my respected predecessor, I should be thankful for a few suggestions as to the views of the congregation on leading points of doctrine."
Deacon—"Well, there is some difference of opinion, but as long as you stick to incidental protection and international bimetalism there's not likely to be any trouble."—Truth.

YIELDING TO MEDICAL ADVICE.

"Mabel, the doctor says you drink entirely too much coffee. It is not good for you."
"Why, mama, it doesn't hurt me a particle, and I like it too well to quit using it. I just couldn't get along without my coffee."
"And Mine. Lookees, the celebrated authority on beauty, says it is ruinous to the complexion."
"Oh, well, if the doctor thinks I ought not to drink it any more I'll drop it, of course."

THINKING ALOUD.

Mrs. Phillips—"George, why were you swearing so terribly in the back yard just now?"
Mr. Phillips—"Swearing, my dear? Did I swear? Well, bless me, I was so busy getting that piece of wire disentangled from the lawn-mower that I didn't know I had time to do anything else."—Cleveland Leader.

APPLYING A PROVERB.

Ikey—"Ish it drue, fader, dot moneysh der root out all evil?"
Isaacstein—"It's drue, Ikey; 'n' fer dot reason you shouldt always pull evil oup py der roots."—Puck.

WONDERFUL BRUTE.

"I do think a dog has a good deal of intelligence," said the man with the spaniel; "but I am not so bad as Browne. He actually had the gall to tell me that he was thinking of studying German, so he could talk to his wife without the dog understanding every word he said!"—Typographical Journal.

AN APPLIED AXIOM.

"My erring brother," said the Salvation Army worker, "do you not know that it is just as great a sin to steal a pin as to steal a dollar?"
"Guess you got it about right," said Billy the Dil. "After this I ain't goin' to steal nothin' that ain't worth nothin'."—Cincinnati Enquirer.

THE BRIGHT SIDE.

"There's one consolation about insomnia," remarked the sufferer.
"What is that?"
"While I lie awake I don't have nightmares."

LITTLE BITS.

Occasionally there is a June bride who promises only to love and honor and be gay."—Boston Globe.

Macdonald—"Hoot, mon!"
McDonnell—"O'i'll not! D' yez take me for a domned owl?"—Puck.

When a tandem couple quarrel in Chicago they go into court and sue for separate wheels and maintenance.—New Orleans Picayune.

"What became of that Samuels girl that Pottershy was flirting with last summer?"
"You mean the girl that Pottershy thought he was flirting with? She married him."—London Tid-Bits.

Judge—"Did you not see the sign, young man, 'No wheeling allowed?'"
Young man—"Yes, your honor; but our wheels have rubber tires and make no sound."—Boston Courier.

"You seem to know a good deal about anatomy. Where did you get your information?"
"Reading the advertisements of bicycle saddles."—Chicago Evening Post.

"I don't see why Isabel is so jealous of Nellie. Isabel is engaged to the man Nell wanted."
"I know that; but Nellie has a '97 wheel and Isabel hasn't."—Cincinnati Commercial-Triune.

"Herbert Watts is a clever fellow. He couldn't find an umbrellah that would roll tight enough to suit him. What do you suppose he did?"
"I can't imagine."
"He had an umbrellah-covah made for his cane."—Cleveland Plain Dealer.

A remarkable temperance sermon was that delivered by a priest in Ireland, which concluded with this convincing statement to his flock:
"What makes ye shoot at yer landlords? The drink! Aye, and what makes ye miss them? The driuk!"—New York Evening Post.

Teacher (to class in geography)—"What is latitude?"
"Johnny Squanch—"The distance north or south from the equator."
Teacher—"What is the distance east or west from a given meridian called?"
Johnny Squanch—"Er—er—lassitude, mum."—Harper's Bazar.

Prison visitor—"Why are you here, my poor man?"
The poor man—"Fer takin' a loaf o' bread and a ham-bone, mum."
Prison visitor—"How sad!"
The poor man—"You bet your life it was sad. W'y, lady, right alongside o' that bread an' meat was a dozen bottles o' beer, and I didn't know nothin' about it!"—Indianapolis Journal.

Here is a sample extract from the latest Scotch novel, which, we are told, we must admire:
"Wangle's richt stoicherty."
"Ay, he'll niver gie ye a bit o' naething."
"A'll watch him again. A'll seen be gettin' a penny fae my father."
"A'm gettin' a penny on Setturday."
"Fa fea?"
"Fae oor Geordie."
"Ha! Ha!"
"Oh, bit a' a!"
"Fae for daein'?"
"Never ye ound fat for daein'."
"Oh, A kent ye wisna gettin' it."
"Bit A am sot gettin' it. Surely A ken better gin you."
"It's a' lees, it's a' lees, it's a' lees. Haud yer tongue."
"No, A'll nae haud my tongue. Fat dlv ye—"
"Fa's gyan owre tae the smiddy?"
"Me, 'An' me, 'An' me."
This makes the pages of Ian Maclaren and of Mr. Crockett seem real lucid.—Boston Herald.

WOMEN! DON'T WAIT.

If You Have Any of These Symptoms Act at Once.

Do you know the reason why you will go to the hospital, my poor friend? Because you have allowed yourself to go from bad to worse. You did not know that that heat, swelling and tenderness in your left side were all signs of congestion of the ovary.

Any intelligent woman could have told you that congestion is fatal to the uterine system, and that an ovary congested leads to tumor formation, and that you were in awful danger. Now you will have to undergo the operation of ovariectomy, the cutting out of the ovary.

Yes, you will recover, at least I hope you will; but you will never be quite the same woman again. Congestion of the ovaries is fatal to health. If you have any such symptoms be advised in time; take a medicine of specific powers! You can find none better than Lydia E. Pinkham's Vegetable Compound, prepared especially to meet the needs of woman's sexual system. You can get it at any good druggist's.

Following we publish a letter from a woman in Milwaukee, which relates how she was cured of ovarian trouble:
"Dear Mrs. Pinkham:—I suffered with congestion of the ovaries and inflammation of the womb. I had been troubled with suppressed and painful menstruation from a girl. The doctors told me the ovaries would have to be removed. I took treatment two years to escape an operation, but still remained in miserable health in both body and mind, expecting to part with my reason each coming month. After using one bottle of Lydia E. Pinkham's Vegetable Compound and a package of Sanative Wash I was very much relieved. I continued to use your remedies until cured. The last nine months have been passed in perfect good health. This, I know, I owe entirely to the Vegetable Compound. My gratitude is great, indeed, to the one to whom so many women owe their health and happiness."—Mrs. F. M. KNAPP, 563 Wentworth Ave., Milwaukee, Wis.

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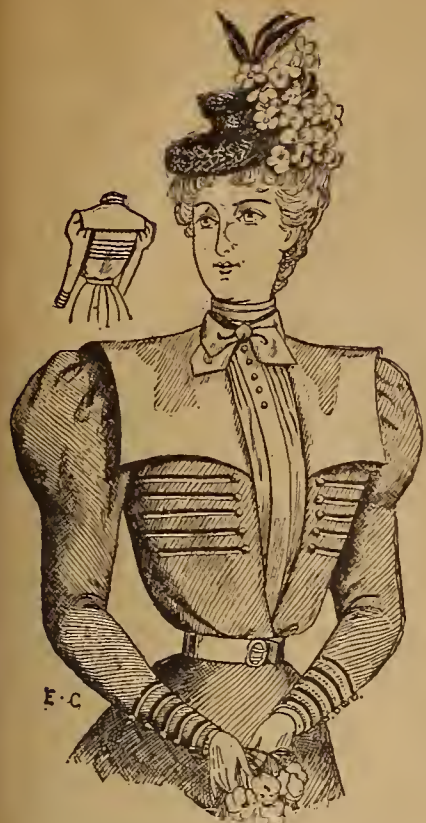
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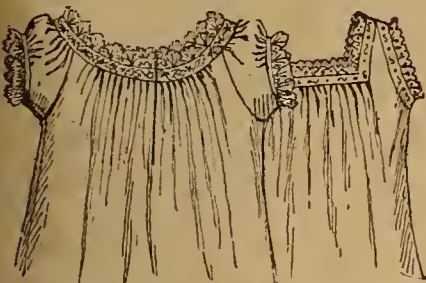
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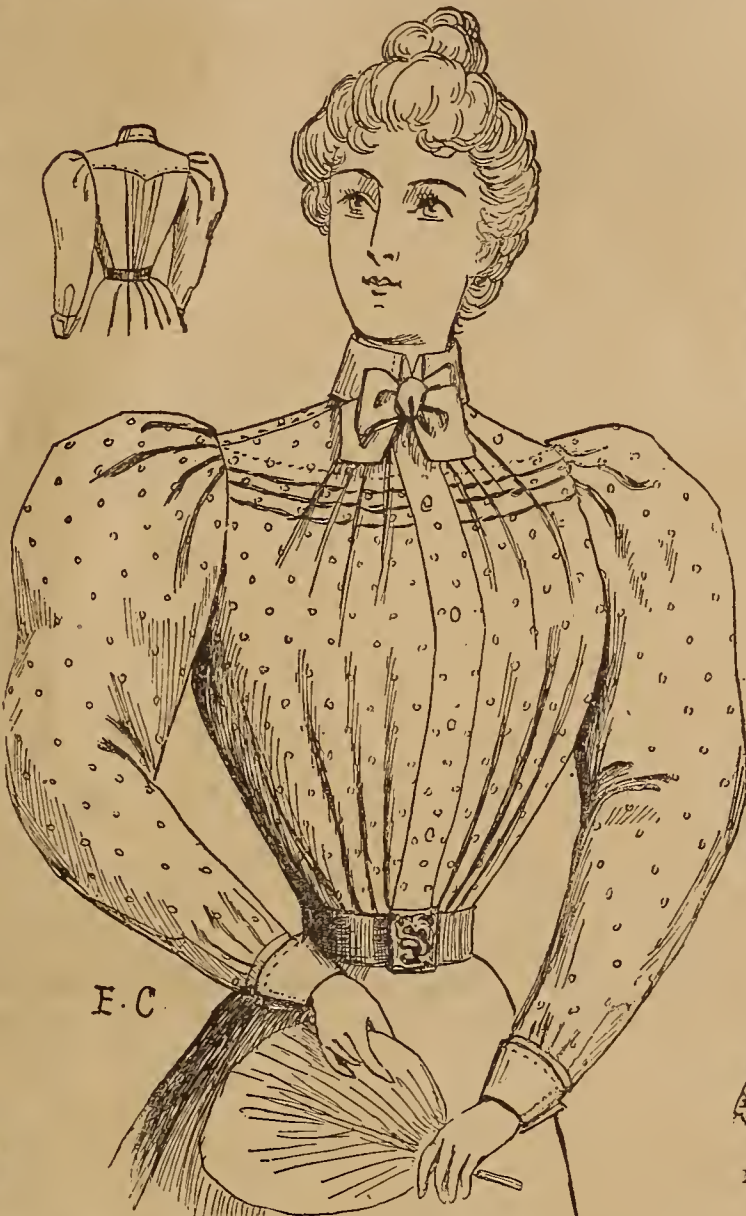
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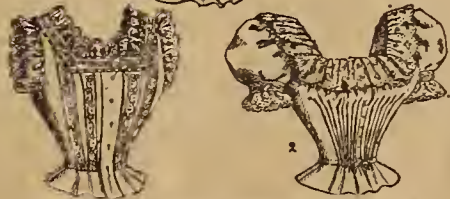
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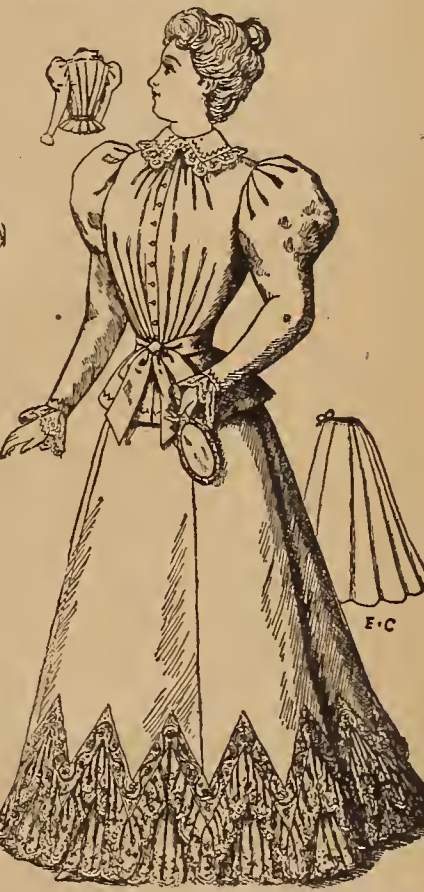
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The sentence was uttered by a great American statesman. It is easy and the missing word is simple. The sentence was selected by a member of our firm, and no one else knows from what book it is taken, or what the omitted word is. The book has been locked up in a burglar-proof safe, and no one will be permitted to see it until the contest closes.

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The Conditions The conditions precedent for sending a guess at the missing word is that each and every guess must be accompanied by a subscription to Farm and Fireside. (Any of the offers in this or past issues of this paper may be accepted.) The guess must be sent in the identical envelop that brings the money that pays for the subscription; forgetting it, or leaving it out by accident or otherwise, or not knowing of the guess at the time you subscribed, or any other reason, will not entitle one to send a guess afterward. *The guess must come with the subscription, or not at all.* No changes or corrections allowed after guess is sent in.

Persons may guess as many times as they subscribe. Club raisers may send as many guesses as there are names in the club, and each member of the club will be entitled to a guess. See clubbing offers in this and back numbers.

\$1 Book A fine \$1 book will be given to EVERY ONE who names the missing word; and if you are the first one to name it correctly, you will get in addition a bicycle free. It costs you nothing to supply the word, and you may get it correctly, as it is easy; but whether you do or not, you get a subscription and a premium. See subscription offers on page 14.

The 4 Bicycles will be awarded to the FIRST woman, the FIRST man, the FIRST girl and the FIRST boy who name the missing word. Therefore, it will be wise to send your guess without delay.

How to Send a Guess You need not write out the sentence in full. Take a separate piece of paper about the size of a postal-card, and write the word you guess, then sign your name, post-office, county and state, and say whether you are a man, woman, girl or boy. *No attention will be paid to a guess not accompanied by a subscription.* Below we give a sample guess, but "running" is not the word.

"RUNNING"

[This is not the missing word]

John Smith (boy)

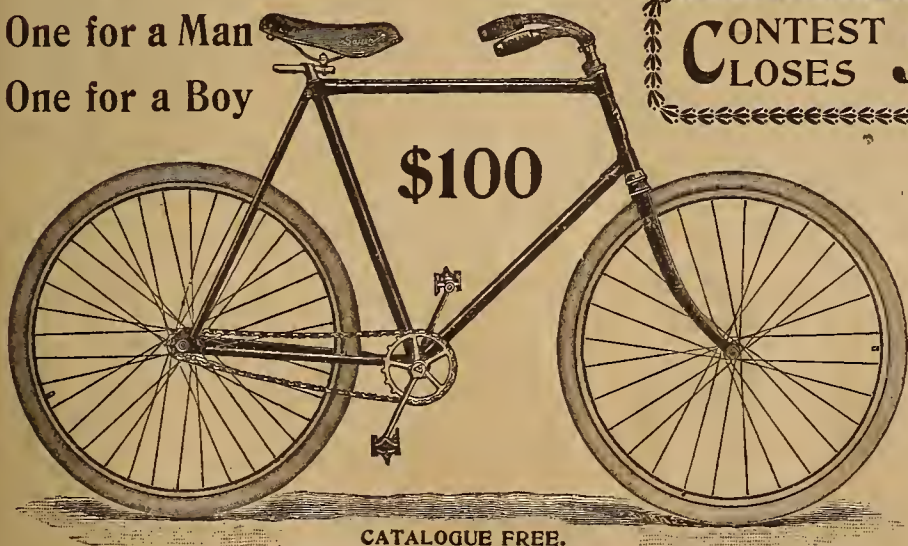
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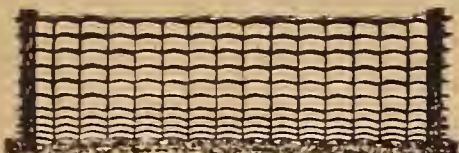
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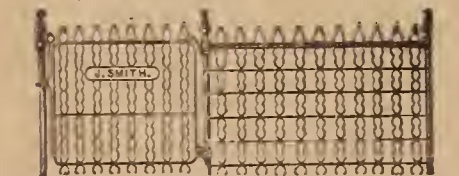
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Humor.

HIS HANDS.

In a western school, not so very long ago,
a little fellow was called up to read for the
county superintendent, who was paying the
school a visit.

The boy was a good reader in all respects
but one; he gave absolutely no heed to
punctuation-marks. When he had finished
the superintendent asked, "Willie, where are
your pauses?"

Willie dropped his book and held up both
hands. "Here they are, sir," he said.—
Judge.

ANOTHER FANCY NAILED.

Flowery Fields—"I see Chauncey Depew
says dat de happiest moments uv his life
wuz when he wuz a barefooted boy, gath-
erin' chestnuts in de grand old woods."

Clogged Clancy—"Wa-al, I don't wish ter
cast no aspersions on Chauncey, but not only
ever lived dat could walk over chestnut-
burrs barefooted; an' chestnuts don't fall till
after a heavy frost, anyway. an' I never seen
a kid barefoot at dat time uv de year."—
Judge.

HIS COMPLAINT.

First farmer—"I went all through the Agri-
cultural Department when I was at Washing-
ton, and blamed if I don't think it's a shame
the way they run it!"

Second farmer—"How is that?"

First farmer—"Why, it's filled up with
young ducks from the cities, and blest if I
think they've given a single farmer a job
in the hull place!"—Puck.

SEEMED A PERSONAL REFLECTION.

"I happened to remark a little while ago
in the presence of Miss Billmore that some
persons carried their fondness for cycling
to extreme lengths. I'd like to know what
there was in that observation to cause her
to turn red, and say, 'Sir!'"

"Great Scott! Don't you know? She is
engaged to a young bicyclist nearly six and
one half feet high."

MORE AND MORE.

"Jeremiah," she said to her husband, who
dislikes pets, "you know that you think a
great deal more of that dog than you used
to."

"That's true."

"I'm glad to hear you say so."

"Every night now he refuses to let me
think of anything else."—Washington Star.

OBJECTION SUSTAINED.

"Do you read the 'World?'" asked the at-
torney who was cross-examining.

"I object!" cried the lawyer on the other
side.

"Upon what ground?" asked the court.

"That my client need not answer any ques-
tion that would tend to degrade and incrim-
inate him."—Life.

NOT VERY FAR OFF.

Uncle Rufus (on his return from his first
visit to the city, where he had seen a hand-
organ)—"Well, Martha, I've seen somethin'
to-day that beats all creation. 'Twas one o'
them new-fangled grindstone fiddles."—Judge.

VERY UNPOPULAR.

Gummey—"The European concert reminds
me of some performers of classical music."

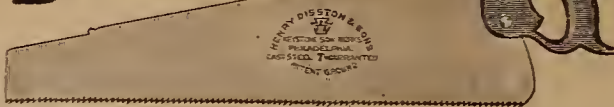
Glanders—"In what way?"

Gummey—"It refuses to play anything
popular."—Puck.

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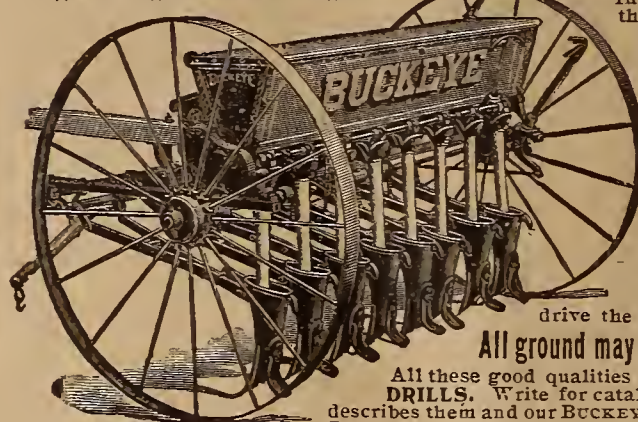
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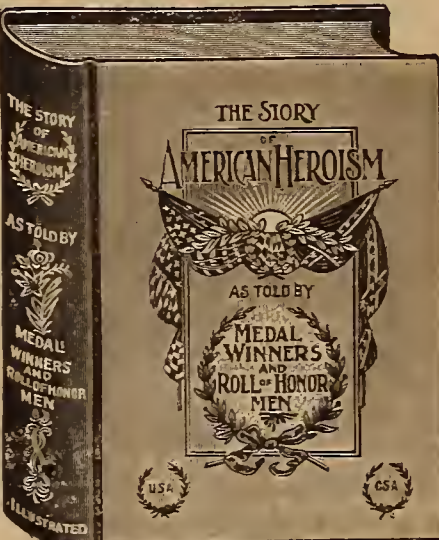
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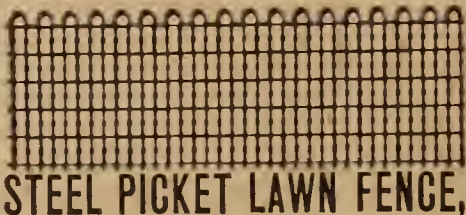
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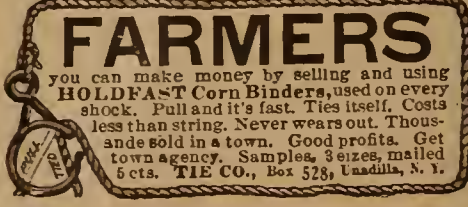
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ANNOUNCEMENT EXTRAORDINARY

July 6, 1897.

We are compelled to announce that the judges in the JUNE word contest have not completed their report, hence we cannot print the names of the prize-winners in this issue, which closes and goes to press to-day, July 6th. The complete report will be printed in the August 1st issue. We regret this delay, but it is unavoidable.

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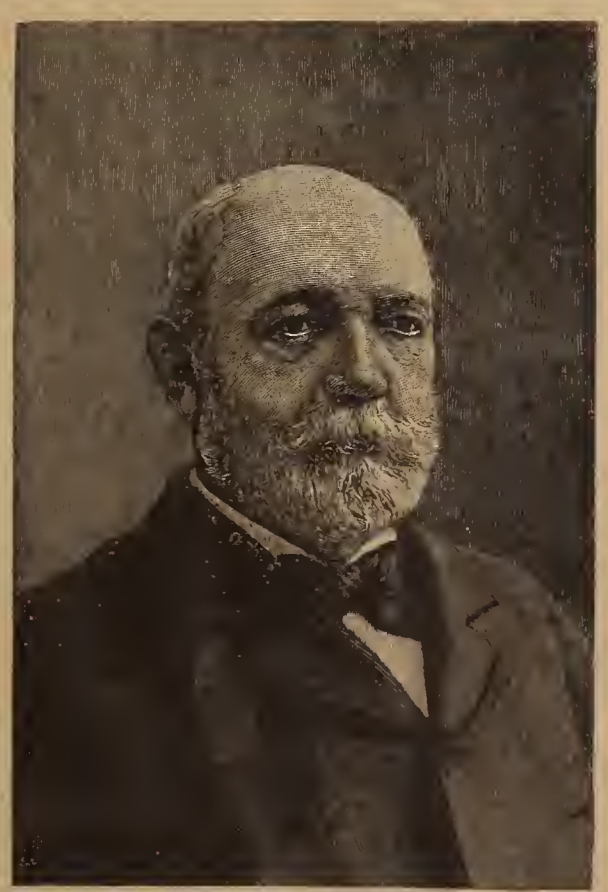
For full particulars see advertisement on page 19.

Publishers FARM AND FIRESIDE.

tions which can never be settled except by one method, and that method is by what in a large way may be called the enlightened intelligence; that is to say, the scholarship of the country. In regard to every single point at issue the most enlightened opinion must express itself so clearly and forcefully that it will commend itself with overwhelming power. The human heart is just, and if the traitor to humanity escapes his proper doom it will be because those who have been trained to be the leaders of thought have fallen short of their high behest. The magnitude of the scholar's duty is to be measured only by the magnitude of the questions that confront him.

"It is the duty of the scholar not only to be the leader of public opinion, but also to be 'an embodiment of public conscience.' It is not enough simply to do; it is necessary also to do right. The more an evil spirit is educated the greater its power, and the worse it is for the world. The fundamental virtues are as necessary for political and social duties as they are for individual life. Upright and downright truth and honesty at all times are as essential as knowledge. It is now, as it always has been, the complete amalgamation of these great elements of power that constitutes the embodiment of the public intelligence and the public conscience—the upper house in the politics of the world."

PRESIDENT D. W. CALDWELL, of the Lake Shore and Michigan Southern railway and Pittsburg and Lake Erie railroad, was born in 1830, in Massachusetts. He entered railroad service as clerk of the Pennsylvania lines in 1852. Since that year he has been, 1853 to 1855, civil engineer; 1855 to 1859, superintendent of the Pittsburg and Connellsville railroad; 1859 to 1869,



D. W. CALDWELL.

superintendent of the Central Ohio railroad; 1869 to 1874, general superintendent of the Columbus, Chicago and Indiana Central railway; 1874 to 1882, general manager of the Pittsburg, Cincinnati and St. Louis, Columbus, Chicago and Indiana Central, Little Miami, Jeffersonville, Madison and Indianapolis, and Vandalia railroads; 1882 to 1887, vice-president of the New York, Chicago and St. Louis railroad; March 28, 1885, to October 1, 1887, also receiver, and October 1, 1888, to Jan-

uary, 1895, president of the same road; September, 1894, to date, president of the Lake Shore and Michigan Southern railway, and January, 1895, to date, also president of the Pittsburg and Lake Erie railroad.

This brief sketch illustrates the merit system of service used in the great business of operating railroad. In his period of forty-five years of railroad service Mr. Caldwell has advanced from the humble position of office clerk through various positions of trust and responsibility to the presidency of two lines.

It is a high testimonial to his executive ability that authorities now name the Lake Shore and Michigan Southern as one of the two most successfully managed railroads in the world. Perfect equality of opportunity is not to be found in railroad service or in any other line of employment, but there are to-day in all lines opportunities for the humblest to rise by virtue of his own abilities and faithful work. That some have done so is evidence that others can and an inspiration to try.

In a conservative editorial on the state of trade, under date of June 26th, "Bradstreet's" says: "The volume of general trade gives evidence in all directions throughout the country of a tendency to improve, though this may hardly be looked for in all lines as compared with last spring. Business is better to-day, or has been better during the past three months, than at a corresponding date one year ago or than it was in October, 1896, or in January this year. There has developed throughout the trade during the current month a pronounced conviction that the coming fall and winter will bring a larger increase in demand for staple articles than has been experienced during a like period since 1893. The complaint oftenest heard is of the unfortunate delay in passing a tariff bill and getting that disturbing element out of the way. The most favorable feature of the business situation, therefore, is its prospective improvement and the comparatively healthful condition in which it finds itself after three or four years of restriction in demand and in credits."

The editorial gives an analysis of business condition based on reports from more than fifty cities, showing moderate improvement within the past two months and widespread confidence that general trade will be active next fall. "The gain," it says, "is more noticeable in the West and Northwest, and is shown in orders for future delivery as well as for immediate shipment. The volume of trade in May was ten per cent larger than May a year ago, and thus far a further increase is shown. In provisions, meats, dairy products and the like no particular complaint is made except as to low prices, particularly for butter and eggs. The present tendency on the part of cereals is to advance, and there has been animation in the speculative market."

THERE has been a gradual improvement in business conditions. There is now a widespread and increasing confidence that in the near future business will be in a better condition than it has been for many months past. Among many things inspiring this hope is the very favorable outlook for all farm crops. Of these the single one of wheat alone is sufficient to cause a decided improvement in business. This country is now harvesting a magnificent crop of wheat of fine quality. Reliable crop experts, like the "Cincinnati Price Current," estimate the yield at 550,000,000 bushels. At the same time the outlook for higher prices is very promising. Our competitors in the foreign market will not be able to furnish their usual supplies this season, and western Europe, on account of a short crop, needs to buy more wheat than usual. There is a good market for our large surplus, and the ready cash it will bring distributed among the farmers will be a powerful aid in the improvement of general business.

WITH THE VANGUARD

PRESIDENT CHARLES K. ADAMS, of the University of Wisconsin, recently gave a baccalaureate address on the subject "The Present Obligations of the Scholar." In this address Dr. Adams sketched the progress of education, and showed the growing relationship between the scholar and the cause of good government. From history he drew proofs of his argument that the controlling considerations in the establishment of the more advanced forms of civil government were presented and urged by men almost without exception college-bred.

Concluding his address Dr. Adams said:

"The settlement of the currency, the question of revenue, the relations of the rich and the poor, the legitimate power of corporations, the adjustment of taxes, the government of cities—these are indeed mighty ques-

FARM AND FIRESIDE

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When renewing your subscription, do not fail to say it is a renewal. If all our subscribers will do this, a great deal of trouble will be avoided. Also give your name and initials just as now on the yellow address label; don't change it to some other member of the family; if the paper is now coming in your wife's name, sign her name, just as it is on label, to your letter of renewal. Always name your post-office.

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We believe that all the advertisements in this paper are from reliable firms or business men, and do not intentionally or knowingly insert advertisements from any but reliable parties; if subscribers find any of them to be otherwise we should be glad to know it. Always mention this paper when answering advertisements, as advertisers often have different things advertised in several papers.

NOTES ON RURAL AFFAIRS.

Popular Bulletins. Director Jordan, of the Geneva, N. Y., experiment station, deserves great credit for his efforts in popularizing the station bulletins. Nine or ten of the "popular editions" have already appeared, and they are readable and can be understood by the great mass of the farmers for whom they are intended. They are free from technical phrases and expressions, and from all purely scientific explanations which have no practical bearing or application. All of these bulletins are short and made up of short paragraphs, with well-pointed headings in black-faced type inserted in the margin. The whole text is brief, plain, and yet the way of presentation not quite as story-like as I had hoped or fixed in my mind as my ideal. I fear, however, that this ideal will never be reached, simply because to bring it up to this standard would require not only the practical knowledge of the expert, but also the pen of the renowned and high-paid novel-writer. We will have to be contented with what is within reach, and I can only hope that other stations—and the Department, in Washington, too—will follow where Geneva station so skillfully leads.

* * *

The Plum and Cherry Leaf-spot. "Spraying for the plum and cherry leaf-

spot, how often and when?" is the subject of the popular edition of Bulletin No. 117. The subject is timely. Just at present we have promise of a great plum crop. But former years have proven to me that there is "many a slip betwixt cup and lip." A few years ago I had just as much prospect of a big plum crop as this year, and yet did not get a perfect ripe plum. Leaf-spot denuded the trees of their foliage, so that the load of plums hung on the otherwise bare limbs and twigs, and, of course, the fruit failed to get ripe. This year I shall not allow a repetition of that occurrence. Spraying will do the business. The conclusions in popular Bulletin No. 117 are as follows: "The plum-grower who is awake to his interests should give to each of his

trees, about ten days after the blossoms fall, a thorough spraying with weak Bordeaux mixture, and repeat the application three weeks later. If this is well done, and the leaf-spot is not especially prevalent, a growth of vigorous, healthy foliage will protect and nourish alike both fruit and tree. An increased yield will be the grower's immediate gain; and the stronger well-ripened, more-resistant wood of his trees will add to his confidence when the trying winter season pinches the tender shoots of disease-denuded orchards."

* * *

The Plum-rot. Plum-rot is another enemy that has repeatedly cheated me out of my crops of plums and cherries. The same means that will keep the leaf-spot in check will undoubtedly do the same service to the plum-rot. I quote the following from the same bulletin:

"While the disease primarily affects the leaves, preventive treatment influenced the fruit, very decidedly increasing the size and preventing much of the premature dropping and consequent decrease in yield. The vigor of the foliage on the sprayed trees also retarded the date of maturity of the fruit; with late varieties later fruit usually means better prices, so the gain in yield is not the full measure of the increased receipts. The sprayed trees of the Italian prune gave an average gain in yield to the tree of forty-five per cent by weight over the unsprayed trees. The cost of this gain, including the actual outlay for spraying and the extra cost for picking, packing and marketing the increased crop, was less than one cent a pound."

* * *

The Bordeaux Mixture. The station confidently recommends the one to eleven Bordeaux mixture as being equal, if not superior, in fungicidal power to the eau-celeste soap mixture and sure not to burn the foliage. To make this mixture, add to one pound of copper sulphate dissolved in eight gallons of water a solution of freshly slaked lime, and stir thoroughly. Sufficient of the lime solution, says the station, should be added to prevent any color reaction when the mixture is tested with potassium ferrocyanide (yellow prussiate of potassium). About two thirds of a pound of lime will be required. Dilute the entire mixture to eleven gallons. I have usually resorted to the ferrocyanide test; but it may be simpler to test the mixture with a piece of litmus-paper. It may be dipped into the clear liquid which is at the top when the mixture has stood awhile. If the paper shows a red or pink color, more lime must be added, until the blue color of the litmus paper shows a slight alkaline reaction. As to the proportions, where only small quantities of Bordeaux mixture are required, I think the best formula, because most easily remembered—and as good as any other—is one pound of copper sulphate, one pound of lime, ten gallons of water.

* * *

Growing Cucumber Pickles. Our pickle industry just at present is in a

bad way. The vines, which formerly used to grow vigorously and bear abundantly until frost, now give us a few pickles, and then wilt and die. The trouble is the wilt-disease, or downy-mildew. This disease affects other vines, especially melons, with equally fatal results. Bulletin No. 119 of the Geneva station treats on this subject. Spraying with Bordeaux mixture of the following strength, six pounds of copper sulphate, about four pounds of fresh lime and fifty gallons of water, is recommended. The bulletin concludes that "in Bordeaux mixture the grower has a convenient, inexpensive and certain preventive of the downy-mildew of late cucumbers, and that if he will apply the remedy early, constantly and thoroughly the pickle crop will again yield profitable returns. Let us hope that this is true. I am going to put it to a thorough test this year."

* * *

The Best Gooseberries. The New York station, in popular edition of Bulletin No. 114, speaks of the best varieties of gooseberries, and how to grow them. Mr. Hall sums up the merits of the gooseberry as a fruit for the home garden as follows: "It will grow well on a great variety of soils, and in climates too severe and seasons too short for grapes; it has no enemies that cannot

be easily avoided or combated; many varieties give excellent yields; and the fruit can be used and marketed either green or ripe, is easily handled and is of characteristic, pleasant tartness, which makes it, green, ripe or preserved, a very desirable addition to the housewife's list of relishes." To all of this I cheerfully subscribe. I like the fruit. The question is what varieties to select. I have a number of large foreign sorts, which, when planted in half shade and well fed and mulched, do very well. But no variety that I know of seems to possess the thrift, the vigor, the productiveness and freedom from disease that is the inheritance of the Columbus. This is really a wonderful plant, and I shall not care to set many plants of other varieties hereafter. The wood growth under high culture is immense. The leaf is large, thick, glossy, and the fruit very large. I believe I can grow a thousand layer plants this year from a dozen old bushes.

T. GREINER.

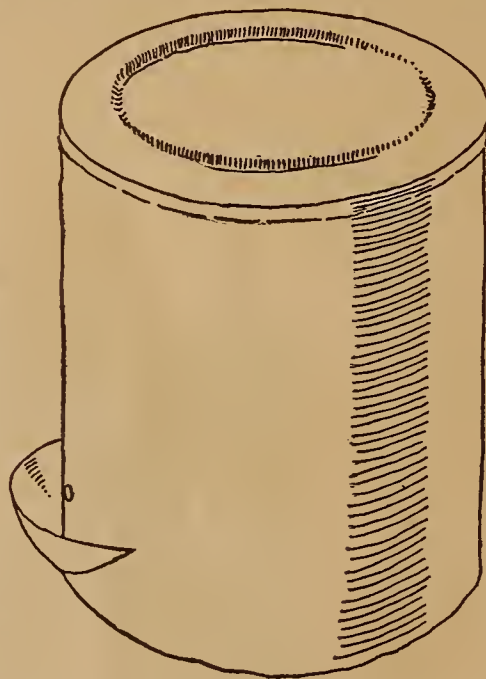
SALIENT FARM NOTES.

"I make my work about forty per cent easier by doing one job going and another coming," said Mr. H, who is one of the best farmers in his section.

"When I go down to the barn I take a pail of slop, the ashes from the stove or anything needing to go in that direction. In returning I bring back the pails, together with a few cobs and other stuff for kindling fires in the morning. I keep my mind on my work while I am at it, especially while doing the chores, and try to avoid all unnecessary steps by working both ways. And I train my boys and hired men to do the same.

"Every tool is returned to its place the moment we have done with it, and that place is nearest to the work we use it in. A farmer has steps enough to take at the best, and every step saved is just that much time and labor saved. Near the kitchen door is a place where everything that goes to the barn or stock-yards is put, and whenever any one goes down he takes along whatever may be found therein. At the barn we have a spot where everything that goes to the house is placed, and the first one going takes it along.

"Our horses, cows and pigs are watered from the same well, and that well is near the gate leading from the yard to the



pasture. When I let the cows out in the morning I am close by the well, and I fill all three troughs. When we come in from the field at noon one fills the troughs while the others feed the teams. There are hundreds of ways by which the work on a farm, and especially about the barnyard, can be expedited and made easier if we will only study them out, and then keep our wits about us while we are at work."

* * *

Of all the insect pests that have spread over this land within the past quarter century the horn-fly is one of the worst. It is on hand early in the season, long before the common black fly appears, and from the time of its advent until the close of the season cattle have but little peace. A chilly spell, such as we often have in summer, stops the annoyances of the black fly at once, but not of the horn-fly. Cool weather only increases its persistency. It will follow a cow into a dark stable, and when brushed off will return in a moment. It is tough and not easily crushed or crippled, and altogether it is one of the meanest pests the farmer has to contend with.

The only way by which I am enabled to milk with any degree of peace and comfort while this pest and the black fly are about is to cover the cow from head to tail with gunny-cloth. Any sort of light gunny-sacking makes a good cover to protect the animal while being milked. It should be large enough to cover her from head to tail, and to reach nearly to the ground at the sides. The milker may get under it if he wishes. When a cow has a cover thrown over her she seems to enjoy the protection it affords so well that she scarcely moves even her tail. I would not be without such a cover while these fly pests are about if I had to use a bed-sheet. Enough gunny-sacking to make a good cover will cost ten to fifteen cents. Get the lightest obtainable. It is quite as effective as the heavy, while in hot weather it is much cooler.

* * *

The farmers' annual battle with weeds is now on. Not only are they springing up among the growing crops, but in the pastures, along the fences and sides of the public roads as well. It is usually considered the duty of the road officers to cut those growing on the highway, but not often is it done until the seed is ripe enough to be at its best. If the road is so constructed that a mower can be used on it, the farmer will find that it will pay him well to run out some morning and lay the weeds low. It can be done in a very short time, and it will not only destroy the billions of seeds that would otherwise be scattered over his farm, but it will also improve the appearance of the highway adjoining his farm sufficient to pay for the work.

Unless one cultivates the land close up to the fences, it will pay to leave a strip just wide enough for the mower to pass along. Then the weeds that spring up can be easily cut down at any time. It will pay well to run over the pastures if weeds are very abundant, having the mower set to cut three or four inches high. I am well aware that this is not done on many farms, but it pays nevertheless, as all who have tried it will readily admit.

* * *

I must tell the readers of FARM AND FIRESIDE how I provided my young chicks with water this season. Heretofore I have used small cans, pans and cups, but none of them proved very satisfactory, as the cups were frequently tipped over, while water in shallow pans is quickly soiled.

I take a quart fruit-can and punch a half-inch hole in one side one half inch above the bottom. Under and around this I solder on a hopper, or trough, something like the spout on a coffee-pot, only wider and shallower. The upper edge of this trough should be one half inch higher than the top of the hole in the can. Now the can-lid is soldered on tight. To fill this little tank, or fountain, sink it in a bucket of water, with the hole up. When full, set it beside the coop where your chicks are, and they will have water as long as there is any in the can, for it will run into the hopper, or trough, only as fast as they drink it out. One filling will provide water for a hen and chicks two to four days, and save lots of work, while the water will always be clean.

These little fountains cost me five cents apiece at the tinshop, and if given two coats of white-lead paint, will last ten years or more. For grown fowls they should be made of galvanized iron, and large enough to hold one or two gallons. After using these tanks a week one would not be without them if they cost three or four times as much as they do.

FRED GRUNDY.

BUSINESS CONDITIONS ARE ENCOURAGING.

Dun's "Review" says: "There is no backward step in business, although the season of midsummer quiet is near. Improvement continues gradual and prudently cautious as before, although in many branches evident where no signs appeared of it a few weeks ago. It is encouraging that crop prospects still grow brighter, that the industries meet a gradually increasing demand for products, that labor questions which had a threatening aspect have been adjusted, that the treasury maintains its ample strength notwithstanding some exports of gold brought about by premiums paid on behalf of foreign governments. The main factor at this time is the steadily brightening prospect for crops."

Our Farm.

FARM THEORY AND PRACTICE.

FIGHTING WEEDS.—It is beyond question that farmers in many sections are losing ground in their fight with weeds. The land is owned by us, and all possible income from the land is needed, but weeds cut it down, and in some instances are the actual masters of the situation. If a thoughtful FARM AND FIRESIDE reader should have the privilege of riding over the network of Ohio railroads in this latter part of the month of June, he would be amazed at the fearful loss of income to farmers due to the prevalence of whitemin in the meadows. There is very little clean hay in the entire state, if one may depend upon the reports of the state, of private individuals who travel extensively and of correspondents. Tens of thousands of acres of good land are helping neither their owners nor themselves. Man was given "dominion," but he seems to have lost it. In a limited amount of travel I have seen hundreds of acres that could have been cleaned with a sharp scythe at the right time, and a profitable crop of hay would have been obtained. Other hundreds of acres should have been broken for a spring crop, or else for a manurial crop that would have put the soil in the best heart for a cash crop next year.

WATCHING FOR WEEDS.—I know that it is easy to criticize, but my kindly criticism is from the standpoint of one who speaks from the most practical experience. It is squarely a question of income. The weeds must not be permitted to rob land of a year's income. Whitemin is a biennial, starting the summer before it does its chief damage. It should be watched for. Last fall I saw that one field was literally full of tiny plants of this pest, although there was a good show of clover also. It was apparent that the weeds would be on top this year, and consequently the young clover was sacrificed, the ground being broken for fall grain. In other fields it seemed possible to clean the weeds out, so that clover and timothy could do their best. It was business to examine closely last fall and know just how much plantain, whitemin and other filth was present to do mischief the coming summer, and we cannot afford negligence in this matter. In the event that there is more filth than we counted upon, the best thing is to turn it under in the spring. As farmers we cannot afford this large area of land that is reseeding itself with foul weeds, and that is neither bringing in any money nor gaining materially in fertility. Our work is to gain mastery so far as this is practicable.

THE OX-EYE DAISY.—The daisy has ruined an immense area of pasturage and meadows in eastern states, and is spreading through eastern Ohio at a rapid rate. Unless something is done soon the damage will be irreparable. In the broken sections of the state, especially the unglaciated portion lying within fifty miles of the Ohio river, a partial abandonment of live stock in the last few years, due to low prices of wool and beef, has led to neglect of the pastures, and some counties are being overrun with weed pests. Prickly-lettuce is spreading, and other noxious weeds are increasing their foothold. This carelessness is not confined by any means to eastern Ohio, but is characteristic of our state, of Pennsylvania, West Virginia and Kentucky. In the interest of those who are trying to keep all their land under control, and in the interest of those who are careless in the matter and lose money by neglecting the weed pests, the Ohio legislature passed a law in 1893 that should have the moral support of every farmer. I call the country reader's attention to that part which is most vital to his interests.

THE STATE WEED LAW.—"The trustees of any township of this state, upon information in writing that Canada or common thistles, ox-eye daisy, wild parsnip, sweet clover, wild carrots, teasels, burdock or cockle-burrs are growing on any lands in their township, and are about to spread or mature seed, between the first day of June and the fifteenth day of October of each year, said trustees shall

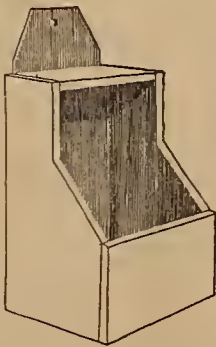
cause notice in writing to be served upon the owner, lessee or agent or tenant having charge of any such land, notifying such owner, lessee, agent or tenant that Canada or common thistles or other noxious weeds mentioned in this section are growing on such lands, and that such Canada thistles or other noxious weeds shall be cut and destroyed within five days after the service of such notice; and in default thereof that said township trustees will enter upon such land and cut and destroy such Canada or common thistles or other noxious weeds; and that the cost of cutting such Canada or common thistles or other noxious weeds, with the cost of such notice, will become a lien against such land. If any owner, lessee, agent or tenant having charge of such lands shall fail to comply with such notice, the township trustees shall cause such Canada or common thistles or other noxious weeds to be cut and destroyed, and may employ any person to perform such labor, and allow such person fifteen cents an hour for the time occupied in performing such labor." The whole expense, including fees of officers, is entered upon the tax duplicate and collected as other taxes.

OTHER PROVISIONS.—At stated times during the summer it is the duty of road supervisors to cut all bushes, briars and noxious weeds along the roadside, or to allow pay to the landowners for doing this work. Any official who fails to comply with the provisions of this law is liable to a fine of fifty dollars. A careful reading of the extract given shows that the provisions are rigid, and it may be possible that in some counties these weeds have obtained such a foothold that thorough enforcement would be a hardship without due notice, so that the worst fields might be put under cultivation in the spring, but it is clear that the mass of farmers will suffer great loss in the near future if there is not faithful enforcement of our weed law. Other states have similar laws, I think, and we should stand for their enforcement everywhere for the sake of future income. If we do this, and also plan to keep our fields from ripening big crops of seed of our common weeds, we can make it possible to get a greater gross income from our farms with less expenditure of labor. There has been gross carelessness in the past, and our loss therefrom grows greater annually. Public sentiment should demand that officials do their duty in respect to all noxious weeds.

DAVID.

THE HANDY NAIL-BOX.

The accompanying cut shows a very handy nail-box. It can be made single, as shown in the cut, or with divisions for different sizes of nails. It can be hung up by the hole in the extension, or a nail can be driven through the hole to keep it from sliding off the roof when shingling. Fill it with nails in the position shown, and tip it over on the back, and the nails will spread out thinly so they can be picked up easily without pricking the fingers.



This tipping over is a decided advantage where two or more sizes of nails are put into the box together, for one is enabled to see at a glance just what he wants, and the nails being thinly spread are easily picked up.

It should be made of half-inch stuff of a size corresponding to the size of nails and work to be done.

R. W. J. STEWART.

WHAT SHALL WE DRINK?

The desire for something to drink that is pleasant, cooling and refreshing reaches the climax during hot, sultry weather, and the question arises, What shall we drink? To be sure, water is good, very good, and perhaps we need not look for anything better; but, after all, humanity does not seem to be satisfied with it. According to an old legend, even Noah, after he came out of the ark, was not satisfied with it. After so many sinful men and beasts had drowned in it he thought water not as palatable as in former days, and he asked

for something better, and got the grape-juice directly from the Garden of Eden, from the fruit of which he made a drink that evidently suited him much better than the water.

Statistics tell us of the enormous amount of alcoholic drinks the American people consume yearly. It pains me to think of this. I am not favorably inclined toward the use of intoxicating drinks. I have good reason to believe that there are not many of our women who would not much rather see their husbands, their brothers or their boys wade into their preserves than go to the cider-barrel or beer-keg; and I want to whisper into their ears now, if they will make a sacrifice of their carefully guarded, and many times stingily withheld fruits, and make the same into syrups to have ready to season the otherwise good water when occasion calls for, they may often prevent their beloved companions and friends from indulging in that which proves so many times harmful, not only to the ones who drink it, but also to others.

Nearly all fruits may be made into syrups for the purpose by the use of plenty of sugar; but generally berries are best adapted. Even the black currant may be turned to good account for this purpose. I remember quite a number of years ago, when I had several large black-currant bushes in my garden, making a quantity of black-currant syrup. Well, it pleased everybody who tasted of it, the peculiar flavor and repulsive odor having disappeared in the process.

Raspberries, blackberries, red currants, sour cherries, grapes, huckleberries and perhaps many other fruits answer our purpose very nicely. Any fruit liquids left after canning may be turned to good account for flavoring drinking-water during the hot summer days. F. GREINER.

MEETING LOW PRICES.

Another illustration of the soundness of the argument used by the agricultural press generally in favor of better assorting and packing of fruits and other products of the farm recently came under my observation, and is well worth the consideration of all growers of farm products.

The price this year for strawberries and early vegetables has been very low in New York City. This has been especially the case with radishes—the hotbed crop sold as low as four bunches for five cents retail, so that by the time the crop from the open ground was ready to put on the market the price offered the grower did not pay for digging them. As a consequence many acres of them were plowed under.

Strawberries started at five and one half cents a quart box wholesale, and by the middle of June were almost a glut on the market at one dollar a crate of thirty-two quarts. It is, of course, understood that this price is for unassorted fruit.

A bright young farmer with a good business head started in last season to prove the truth or fallacy of the "selected specimens and attractive packing" idea. His market was a well-known summer resort, and his goods were sold from door to door direct to the consumer, thus getting the first price for his wares. He was but one of fifty or more men covering the same market in the same way, so that the reader will see that competition was good. His strawberries were exclusively Sharpless and Gandy, both varieties of good size and form. His plantations had received the best of care, and his berries were fine. He was not content, however, to market them in the old way, and so discarded all worn and berry-stained baskets. Every berry not strictly first-class was discarded, but as they were quite uniform in size, little loss resulted from this close sorting. A few strawberry-plant leaves were laid in the boxes, so that they came a little over the edge. The boxes were more than even full—they were well rounded up, and the hulls of the top layer turned downward, so that none showed. Our friend was careful, however, that the fruit was as good at the bottom as at the top. One of the "carriers" used in the field and holding four quart baskets was attractively painted white, the four well-filled boxes set therein and covered with a clean white cloth. In this way they were presented to the customer. The results of these little attentions were from two to four cents a quart more than was received by competitors who adopted the ordinary methods. Our friend carried the same idea through

all his products, and his plan of neatness and general attractiveness even to his person.

Butter was put up in pound balls and wrapped in oiled white tissue-paper. The rolls were laid side by side (none on top of others) in large, flat pans, and handled with a broad, flat spoon or shovel. He was somewhat ostentatious in handling his wares, making it very apparent that he did not consider it proper that he should take in his hands the food his customers would buy to eat. Eggs were guaranteed fresh, and if the shell was at all soiled, it was carefully cleansed. His method of handling poultry excited my admiration, and proved him to be not only a sharp trader, but a man of close observation, fully realizing the fact that people at summer resorts were able and willing to pay a good price for daintily attractive edibles, and fully appreciated their attractiveness.

The poultry had been carefully killed, plucked and dressed. The heads were removed, and the neck cut back so that the skin could be drawn over an inch or so, and tied, which was done with a piece of narrow blue ribbon. The feet had been carefully washed, and the legs were tied together with the blue ribbon. As I have said, the fowls were dressed, which was not the usual way of putting poultry on this market; but our friend always made it a point when offering his attractive chickens to dwell on the advantages of dressed poultry, not only from the standpoint of cleanliness, but healthfulness. He always received several cents a pound more for his poultry than other dealers—enough more to pay him well for the loss in weight by the removal of head and entrails and for the care taken in making them attractive. Each fowl is carefully wrapped in a clean white cloth, and so displayed to the customer, the vender being careful not to touch the bird itself with his hands. Our friend has already earned a reputation for the quality of his goods, the cleanliness of his wares, his wagon, his packages and himself. Occasionally he runs across a prospective customer who objects to his prices, and especially on poultry, but his description of the evils resulting from eating poultry from which the entrails are not removed until they are prepared for cooking is usually sufficient to make a convert to dressed poultry at once. He tells me that he now has regular customers who take all he has to sell, and are anxious to get it. He also says that he expects to supply many of his customers with home-preserved and canned fruits this fall (his wife is somewhat of an expert in this line).

I am aware that some reader will perhaps think that it does not pay to go to all this trouble or that there are not enough particular customers to warrant it, but this is just where a mistake is made, and if you are a shipper to a large city market, the chances are eight in ten that your commission man will do just what we advise you to do.

I know more than one commission man in New York who makes a business of assorting the produce sent him by growers when it is not up to the mark. Eggs which are reasonably sure to be fresh are wiped clean and packed in neat boxes holding a dozen eggs; brown and white eggs are not mixed in the same box. Butter of good quality sent in pound or two-pound rolls or balls are smoothed over, a fancy stamp pressed on and wrapped in tissue-paper bearing the imprint "Derrington Dairy," or some other fanciful name. Small fruits are assorted and repacked, apples are closely assorted, the selected ones wiped and rubbed until they shine, and are sold as "fancy." A dozen other little things are done to make the commodity more attractive. The result is quicker sales at increased prices, which goes into the pockets of the commission man, when it ought to go into the pockets of the producer, and would if he would do the things suggested before shipping.

No one familiar with markets questions the overproduction of many products of the farm, but few will say that there is a glut in the market of selected products attractively presented to the consumer.

To-day berries from the field sold from the baskets into which they had been picked from the plants are offered in New York markets at a price which hardly pays for the picking and handling, yet selected fruit attractively packed is bringing at retail as high as fourteen cents a quart box.

Our subject is worthy of consideration, is it not?
BARTON HALL.

Our Farm.

NOTES FROM GARDEN AND FIELD.

THE FIGHT WITH BUGS.—Some seasons the fight with some of the bugs and beetles that attack our crops seems terribly uphill work. The past season, for instance, we (that is, farmers generally) have planted unusually largely of potatoes, and consequently the potato-beetles have been increased at a fearful rate. This year, with a more moderate acreage of potatoes, late planting and an unusually favorable season for the development of these insect pests, the whole ground seems to be alive with potato-beetles. They are actually waiting for the potatoes to come up, in the meantime living on anything green that promises subsistence—old potatoes as well as tomatoes or egg-plants now set in open ground. The potato-sprouts are hardly showing themselves above ground when the hordes of hard-shells fall upon them with greedy jaws. Hand-picking seems the only thing that promises relief, but even in a small home-garden patch it requires the eternal vigilance that is the price of comparative safety. The patches (especially of egg-plants) have to be looked over for beetles four or five times a day, and perhaps oftener if we wish to be sure of saving our plants. This is an annoyance which I find it very hard to get used to. After the plants have once acquired some size, we have rather plain sailing, for covering them with the Bordeaux mixture and Paris green combination, and keeping them thus covered, will surely keep them intact, and especially make a sure thing of preventing injury from the jaws of the slugs.

Another dreaded enemy that has appeared in unusually large numbers is the striped cucumber-beetle. I had a most promising patch of Hubbard squashes, and prided myself that the plants were out of danger and on the sure road to a big yield. But this morning, on going over the patch, I found the yellow-striped fellow present by the thousands, and a large number of squash-hills without a live plant. And this in spite of the fact that the hills had been given several fair applications of tobacco-dust and bone-meal. But when I saw what was going on I hurried to the barn, mixed up a lot of tobacco-dust and bone-meal again, and proceeded without delay to cover the hills and plants thoroughly with this mixture, a big handful being applied on and around the plants of each hill. The yellow-striped beetles at once departed to more hospitable grounds, and what large black squash-bugs (of the malodorous kind) I came across were mashed without ceremony. And let me tell you, in doing work of this kind, I wear thin rubber gloves. They come high—price being \$1.75 a pair—but they are very convenient for many purposes. I can dig in the mud, transplant in sticky soil, mix up chicken feed for baking, mash bugs or worms between my fingers, or pick up anything that I do not like to touch with the bare hand (even when cleaning fish for the table) without soiling my hands or scenting them with a disagreeable smell, as in the case of cleaning fish. Now, you may be sure that I shall keep a good watch of my squash-patch, and whenever bugs or beetles make their appearance again, I shall try to take the proper precautions to avoid injury and damage. Heretofore I have always found tobacco-dust and bone-meal (one or both in mixture) a reasonably sure and safe preventive of damage by the yellow-striped cucumber-beetle, and hope that they will not break the record this year. On the other hand, it looks to me very likely that the beetles would rather eat plants flavored with tobacco-dust or bone than starve.

RAISING LATE CABBAGE AND CAULIFLOWER.—I have also had more trouble than usual with the maggot that attacks the roots of cabbage and cauliflower. A large proportion of my early cabbage has been destroyed by this pest, and I had to replant with later and late varieties in order to have all vacancies filled. At the same time I find almost all my late cabbage-plants in the seed-bed badly affected. The majority will have to be thrown away. I pick out those that do not seem to have been attacked as yet, and then dip them into strong lime-water before planting, to kill what eggs or larvae there may be on them. But it is not unlikely that I shall find myself short of plants of winter cab-

hages when I come to make a business of setting them out. Fortunately I have a way out of this difficulty. I prepare the ground as I would for any close-planted garden crop; then mark out the ground in shallow drills say three feet apart, and then drop a pinch of seeds (four or five) every twenty-four or thirty inches apart in the drill. A move with the right foot covers and firms them, and they have thus far seldom failed to come up promptly, and on good soil make good heads. I plant cauliflower and kale in the same way.

GOOD HEAD-LETTUCES.—For many years I have grown my early summer lettuce by sowing seed in drills at the earliest good opportunity in spring, and then thinning the plants to stand the proper distance apart. I find that I can have lettuce-heads about as early in this way as if I grow plants in cold-frame or greenhouse and transplant to open ground. But if anybody can produce finer heads by any methods than I have again in my garden at the present writing. I would like to see them. I find Burpee's new Morse lettuce, and Manle's Philadelphia Butter lettuce of about the same character, and both of extra close heading habit; in fact, as solid as a good cabbage, and my people again pronounce my this year's crop of both "the best lettuce we ever had." When the plants are young, that is, before they have formed heads, they look coarse, and the foliage thick and leathery, and by no means very inviting. But after heading they are "just splendid."

T. GREINER.

ORCHARD AND SMALL FRUITS.

CONDUCTED BY SAMUEL B. GREEN.

INQUIRIES ANSWERED.

Blackberries.—R. B., North Bennington, Vt. Blackberries should be set three feet apart in rows eight feet apart. They will bear a partial crop the second year and a full crop the third season if they do well.

Apricots Not Bearing.—J. T., Weeping Water, Mo. I think you had better get some other kind of hardy apricot to set near yours to furnish pollen for cross-fertilization, but it may be that the fruit is stung so badly by the curculio or gouger as to cause it to drop, in which case cross-fertilization, of course, would do no good; but I would try it as suggested. Please send me a sample of the fallen fruit if you can.

Lice on Young Fruit-trees.—C. S. A., East Sharpsburg, Pa. If your trees are so small that the tips of the branches can be reached easily, a good plan is to dip the tips into a pail of tobacco-water. Tobacco-water should always be made from raw tobacco (tobacco-stems from a cigar-factory are good). Pour scalding water on the stems, and allow it to set until the color of strong tea. The tobacco-water is liable to spoil if allowed to stand for a day in warm weather, so it should be made when wanted. I have been spraying my plum-trees for lice, but have made up my mind to discontinue, as the young of the ladybugs are very numerous, and I think will destroy the lice before they can do serious damage here.

Buckthorn Seedlings.—J. C. M., Duluth, Minn., writes: "I sowed buckthorn seed in my garden this spring, and now some of my friends say it will not grow, and that I ought to have sown it in autumn."

REPLY:—It is not necessary to sow buckthorn-seed in the autumn; in fact, I prefer not to do so, but to crush and mix the berries with moist sand in late autumn, place in a box, and bury outdoors. In the spring bring the box into the house, stir them at least once daily, and when they show signs of starting, sow them in good mellow soil. If the seeds have been kept dry all winter, they should be put to soak in water for a few days, and when swelled up they should be rubbed apart and mixed with twice their bulk of sand, in which they should stay until they show signs of starting, when they should be sown in the open ground. But it is always preferable to mix the seed with sand and bury outdoors in autumn.

Cherry Seedlings.—S. M. M., Sabetha, Kan., writes: "Can cherry-seeds be made to grow in this country, and if so, how? I have tried it several times, but could never get them to grow."

REPLY:—Cherry-seeds will grow if treated right. I have some that came from Russia last year that are now breaking ground nicely. These were treated as follows: They were received late in the fall, were mixed with moist sand in a box, and were buried outdoors until this spring. I allowed them to stay in the sand until they started, when I planted them out, and they are now taking on their third leaves. Many fail with such bony seeds by not keeping them moist

and exposed to a freezing temperature in winter. It is necessary to freeze them in order to crack the shell, or they will not grow. If cherry, plum and peach pits are once allowed to get thoroughly dry they will seldom, if ever, start until they have been in the ground over winter; that is, if sown this spring will not start for a year.

Propagating the Gooseberry.—G. W., Flat Creek, Mo. 1. The gooseberry does not grow well from cuttings, but grows easily from layers, which should be put down in July. To do this, take any strong shoot and bury the end of it three inches in the ground, leaving the side shoots sticking out of the ground. Do this at once, and by late autumn the side shoots will probably have produced roots. Mulch them in the autumn, and plant out in the spring, making a plant of each rooted shoot. This same method of layering is applicable to grapes, currants and many other plants. Some plants will not root from layers the first year, but if not the first year, they will the second. Last season my Champion gooseberry layers did not root well, as they were laid down pretty late in the season, and I decided not to dig them until they had another year in the ground. 2. In pruning gooseberries remove the weak wood, and shorten the new growth from one third to one half its length. Severe pruning is necessary for the best results with gooseberries.

Water-sprouts for Scions—Grafting—Wagoner Apple—Budding.—D. H. S., Ionia, Mich., writes: "Will what are commonly called water-sprouts do as well for scions to graft with as to cut last year's growth off the end of a bearing limb?—About how large (thick) a limb may be successfully grafted to hold a graft firm?—Could the Wagoner apple-tree be made to bear fruit every one or two years by manuring well around the roots?—In some of last fall's budding the bud is dead, but the other part of the insertion is green."

REPLY:—If the wood of the water-sprout is well ripened and healthy, it makes a fairly good scion.—It is not common to cleft-graft in limbs over two inches in diameter, but limbs of any size may be grafted by setting the scion into the side and not splitting it at all.—It would undoubtedly bear more regularly if well manured.—I have often asked myself this question, for I have had much trouble from this sort of a failure. I think early budding is more liable to fail in this way than late budding. I have the most trouble from this cause from budded plums and peaches. I think also that on retentive, moist land there is less danger from this cause than on dry land.

Peach-yellows—Bugs on Melon-vines—Pinching Raspberry-vines—Spur-blight.—F. E. R., Nepesta, Col., writes: "What will prevent the 'yellows' in peaches?—What is good to put on small melon-vines to keep the hogs from eating them?—Is it any benefit to pinch off the ends of the runners of raspberry-vines to make them become harder, and if so, when is the best time to do it?—There is a disease or blight on apple-trees in this neighborhood which affects old orchards as well as young. It seems to come on twigs bearing a bunch of apples, and whenever it strikes them they wither, and the leaves all curl up and turn black. It seems to be spreading considerably."

REPLY:—There is no remedy for the yellows. The only preventive is the removing and burning of the infested trees.—Use kerosene emulsion and dust with plaster or air-slaked lime.—I am in doubt about this. I have practiced pinching once in the season for many years, but in the last few years I have come to doubt the advisability of so doing. However, the fact that I am pinching the most of my blackcaps this season shows you how I feel about them. I have believed that more fruit is produced on lateral than on the main canes.—What you refer to is called spur-blight, and it is quite abundant in the West this year. There is no practicable remedy for it. It is probably caused by the same disease as fire-blight. My Duchess apple-trees are somewhat affected at this writing. I do not expect it to do serious damage here.

Canker-worms—Strawberries—Roses.—J. A. A., Taunton, Mass. I would spray the trees with Paris green and water at the rate of one teaspoonful of the poison to three gallons of water. This will kill the worms. They will probably be gone by the time you get this answer, but remember the remedy for next season.—Strawberries are best set in spring, but may be set in August. The ground should be as well enriched as for the finest garden you know of. Set the plants eighteen to twenty inches apart in rows four feet apart. Commence cultivating early, and continue it all summer, with horse-cultivator going between the rows; as the plants throw out runners these will be crowded into the rows; gradually narrow up the cultivator and allow the plants to extend into the space between the rows, and by autumn the plants will be in matted beds two feet wide, with a two-foot space between. In December cover with about two inches of marsh hay or straw, which should be drawn into the space between the beds in the spring.—

Roses need a rather heavy clay soil and plenty of clear rotted cow manure for best results, but, of course, the strong-growing kinds will grow almost anywhere, and any well-rotted manure will answer very well. For best results they should be grown in beds, and the land be kept loose and soft all summer. It should be well stirred after each rain or watering. The old and weak wood should be cut out each spring, and the long canes shortened. The foliage should be protected from insects. It is also a good plan to forcibly spray the under side of the foliage with water from a hose, if you can do so, and give them plenty of water at the roots, but avoid getting the land water-soaked.

Box-elder Bug.—J. M. G., Alton, Ill. The box-elder bug is a sucking insect, and hence cannot be poisoned by Paris green or similar insecticides, but kerosene emulsion is a fairly satisfactory remedy. However, it is a big and rather unsatisfactory job to attempt to spray large box-elder trees, and often quite out of the question, but taking advantage of the peculiar habit of these bugs in collecting in large masses on and about the trees in the fall, we may greatly reduce their numbers. They are very slow, and apparently stupid during the colder parts of the day in autumn, when they can be destroyed in large numbers by pouring boiling water on them, or collecting and brush-



BOX-ELDER BUG.

a, b, mature bugs. f, g, young bugs.

ing them into a basin containing kerosene, crushing them where they are. Where the bugs collect on the sidewalks the kerosene may be poured directly on them. The bugs winter over on the under side of board walks, in barns, sheds, houses and elsewhere. In your case, if the bugs are swept from the side of the house onto sheets early in the forenoon, and destroyed, there will not be many left to bother you about coming inside the rooms. This bug does not seriously injure the box-elder, but in the South it injures the cotton-boll, and is called the cotton-stainer. It is something like a large chinch-bug in appearance, and very suggestive of an enlarged bedbug, but is harmless in the house. See figure herewith.

Strawberries Not Fruiting—Currant-worm.—M. A., Indianapolis, Ind., writes: "I have a fine lot of strawberries in fine condition and well cared for. They bloom profusely every spring, but I barely get one fourth of a crop. Some rows do nicely, but again whole rows will not bear at all. On examining them this spring I find that fully one half of the blossoms are 'blind.' I am told. The soil is excellent, and the plants are thrifty-looking. Can you tell where the trouble lies? I am an old reader of your paper, and enjoy it very much. For the benefit of other readers who may be troubled with the currant-worm I will tell them how I fight this evil: I take two tablespoonfuls of crude carbolic acid and one pint of soft soap, mix thoroughly, then add one gallon of hot water; let it stand to cool; turn the hush so as to wet the under side of the leaves well with this emulsion. If the work is properly done, one application is sufficient for one season. It does not hurt the flavor of the fruit."

[A simpler remedy is to spray with water containing one ounce of white hellebore to the gallon.—S. B. G.]

REPLY:—I take it that your plants are largely pistillate. It seems to me that your best plan would be to set a new bed with plants obtained from some well-posted strawberry-grower. If you had sent me a sample of the flowers, I would have a much clearer idea of the trouble of which you complain. I have frequently known of beginners getting plants from old beds that they knew nothing about, and in which the pistillate and bisexual kinds were mixed, with the result that they got all, or nearly all, of some pistillate sort, because these are often the most vigorous, and look to a beginner as the best.

Our Farm.

THE "THISTLE" MILKING-MACHINE.

SOME time ago a Scotch milking-machine was placed in the dairy of the Northern Hospital for the Insane, at Kankakee, Ill., a state institution, and since then it has been given a thorough trial. Dr. Gapen, the superintendent, pronounces it a very successful affair, and in order to demonstrate the fact to the public he gave a practical exhibition of its workings to a number of invited dairymen the other day. The machine is the property of a company in Scotland, and is not as yet for sale in this country; but if the other points in the question are successfully proven, that no injurious effects are noticed in the cows or the process of keeping the tubes, etc., clean is not difficult, then it will not be long before a public demand will find then on sale by a special agency or supply firms.

The principle upon which the milking is done is as follows: On the first floor of the cow-barn are the pump and the vacuum tank. The former is worked by steam procured from the pasteurizing plant. The pump exhausts the air from the tank, the suction from there passing through a reducing-valve that gives a constant suction of several pounds in the piping running horizontally above the cows' heads throughout the stable. For every two cows a stop-cock is fixed in the piping, to which is attached a little box, in size and looks much like a telephone transmitter, which is called a pulsator. Within that box is the key to the whole mechanism, the modus operandi of milking by machinery. The little transmitter (for such it really is) contains the mechanism which produces the rise and fall in the vacuum, or suction, in the teat-cups. When the suction is least the teat-cup is circular in form, as shown in No. 1. As the suction increases the cup begins to collapse at the top, compressing the teat at the bottom, as shown in No. 2. The still further increase of the suction collapses the cup, with a stripping action from the root to the tip. The air is then admitted to partially destroy the vacuum, allowing the cup to resume its original shape. This action is repeated forty-five times a minute, and it comes as near the action of the sucking calf as can be done. Every time that the suction is reduced and the cup takes its original form, it allows the milk to flow down and fill the teat, the next compression forcing out the milk. The milk flows through a short piece of India-rubber tubing into a glass milk-trap set in the top of the milk-receiver. The trap being of glass, the flow of the milk can be observed and the suction may be withdrawn as soon

men were engaged in milking a kicking heifer, and she stood the artificial method of doing business without causing any trouble.

The artificial hands are made of good quality rubber, and are called pulsating teat-cups, being slightly corrugated on the interior. The four teats may be milked single or collectively.

Dr. Gapen is quite enthusiastic over the machine, as were all others who saw it in operation. After one or two trials the cows are said to take to it naturally, and the sight of ten cows being mechanically milked and without any apparent force is an inspiring one, and is calculated to cause one to think that the inventive genius is very much alive in man. The dairy equipment of the Illinois Eastern Hospital deserves special mention as being the most elaborate and complete in the world; consisting as it does of a set of silos supplying ensilage to each of the barns.—The Dairy World.

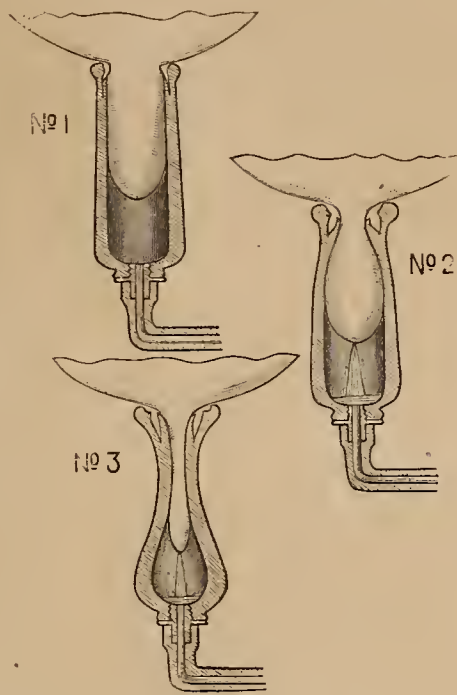
ASPARAGUS FOR HOME USE.

After the family of the rural district has been confined all winter to the usually monotonous diet of the farm, the good housewife longs for a chance to supply her table with some more wholesome and palatable products from the kitchen garden. A good asparagus-bed gratifies this desire. Next to pie-plant (rhubarb) asparagus is the first vegetable nature produces, besides it is one of the most delicious, is very healthy and easy to produce. The different methods of preparing it for the table enables the head of the household to offer acceptable changes to the members of her family. Every farmer's family is deprived of one of nature's great blessings if the garden is lacking and has no asparagus-bed. It can be had with very little trouble after it is once started. The work of keeping it in producing condition is comparatively a mere trifle, provided this trifle is done in time; but if neglected, it requires a great deal more and harder work to restore it to its proper condition than it takes to keep it from getting the start of us in the first place. Once, when bringing in a mess of freshly cut asparagus from the garden, a neighbor's wife made this remark:

"It is strange; we have an asparagus-bed, too, but never have any asparagus."

An investigation revealed the fact that the bed here mentioned had never received any attention after it had been planted. It was as hard as the road-bed and well grassed over. No wonder they never had any asparagus. We cannot expect to produce asparagus under such treatment any more than we can expect a potato crop, if we never go near the field after it is planted until digging-time.

injure the asparagus roots, with which the bed is interwoven at that depth. Especial care must be taken when spading right over the crowns of the plants. They are somewhat near the surface of the soil, and easily reached with the fork and ruptured. But these places can be plainly noticed by the dead stubs of last season's growth. Every time a mess of asparagus is cut and signs of vegetation are noticed, the garden-rake is drawn over the bed the whole length and touching every spot. This stirs the ground, and ends all vegetable life for the time being. After we stop cutting, this raking process is kept up more or less all summer, and I would say right here,



that the better care we take of our bed this summer, the easier work it will be to keep it in proper shape next season.

In the fall, or when the bed is to be covered again with the usual fertilizer, all growth of stocks is cleaned off; but the seed-stocks should be removed before the seeds drop, as they are as bad as any weeds if suffered to grow.

G. C. GREINER.

PICKING AND MARKETING FRUIT.

To secure fruit for market at the proper stage of ripeness, and the least possible waste of time as well as fruit, is a matter of much importance to a fruit-grower. Each grower has, or at least ought to have, a system by which he may expedite the work, and it is a question to many whether their system is the best or not. The method I use is slightly different from any I have ever seen, and there may be some useful suggestions in it to some.

I find the most trying part of the fruit harvest is to properly manage a lot of boys and girls while they are gathering the fruit; to see that the ripe fruit it all gathered and not muddled in picking; that there is no deception practised in filling the boxes, which I am sorry to say often happens, and to tally and check the quarts picked by each person.

To begin with, I have each row of berries numbered, and also each crate; then when a row and crate is assigned to a picker, each is entered into the check-book opposite that picker's name. When inspecting the vines where the pickers have passed over, should any carelessness be noticed, a glance at the check-book will show to whom it is due; and likewise when inspecting the crates of berries, for as fast as a picker fills a crate, an empty one is assigned him and the filled one examined. If the berries should be crushed, boxes not filled or any other fault, it is only a moment's notice to discover the culprit.

The failings, or errors, if such they may be called, are charged against the guilty person, and by this record I am able to cull out the undesirable pickers, should they persist in their misdemeanors when subsequently cautioned.

I manage as much as possible to engage my pickers for the whole season, and so I give tickets at the end of each picking, to be cashed at the end of the fruiting season, or at the end of the week if demanded. By paying a small premium at the end of the season to those who remain through the "poor pickings," which often occur at the last, I am able to retain the most of my good pickers.

A record is kept in the check-book of the number of quarts picked by each person, so there can be no mistake made when settling with them.

B. A. WOOD.

EXTRACTS FROM CORRESPONDENCE.

FROM ILLINOIS.—Hancock county is a beautiful farming country. Wheat is looking fine. Oats are thin this year, and about one half of them were plowed up, and the ground planted in corn, which is growing nicely, although a little late. This is a fine country for fruit-growers. There will be no peaches this year, but plenty of other fruit. Timothy and clover look fine. This is also a good cattle country, and a good place for sheep and hogs. The land here rents too high for a poor man to make much money. It rents for \$3 to \$5 an acre. This county possesses an abundance of timber. Sawmills are running the year round, and some black walnut logs are shipped from here. Timber land is worth about \$40, and prairie land for \$60 to \$80 an acre.

La Harpe, Ill.

J. F. K.

FROM OKLAHOMA.—There are hundreds of good farms in D county, Oklahoma, unoccupied. I have been farming here five years, and good crops have been the rule in that time. Fall wheat, Kafir-corn, sweet potatoes, sorghum, peanuts and watermelons are as sure to make a crop here as in any state in the Union. These crops seem to be especially adapted to the soil and climate. Peaches, grapes and plums seem to be sure of success in growing, and the fruit is of choice quality. Poor people have nothing but toll before them wherever they are located, but those in the thickly settled eastern states who depend upon working out or working other people's land can make a living by their labor here just as well as anywhere, and secure and build up a beautiful home of their own, and after a time be independent. I have lived in New York, Indiana, Illinois, Wisconsin, Nebraska, Kansas, Washington, California and Oklahoma, and this is the most healthful and pleasant climate the year through I have ever lived in.

Hackberry, Oklahoma.

FROM OREGON.—One may travel the wide world over and find but few places of equal extent so full of natural wonders and beauties of nature as Klamath county, Oregon. The lakes and meadows, mountain forests and canons deserve more space than is possible to allot to them in an article of this kind. The queen of western lakes is the Upper Klamath, which nestles in the thundered spurs of the lofty Cascades, one of which—Mount Pitt—reaches the altitude of the eternal snows. Looking westward from the summit of this mountain, we can gaze far away on the blue waters of the Pacific, over one hundred miles away. To the east one may gaze far away into Idaho and Nevada. Crater lake, which lies to the north of Upper Klamath, is one of nature's most stupendous productions, to which neither pen nor brush can do justice. It is situated on the summit of a mighty mountain, and, as its name implies, is the crater of an extinct volcano. Its perpendicular walls of rock, rising nearly two thousand feet above the level of the water, furnish but one place in the circuit of fifty-five miles where man may descend to the lake. It is the deepest known body of fresh water on the American continent, and second to but one in the world. Anna creek, from the foot of Crater Lake mountain, rises from one spring, and flows away. Castle creek flows from the same mountain to the west through a similar gorge, whose banks are lined with mighty castles of rock, and finally adds its water to the ever restless Rogue river. In our land one finds springs of boiling water, while almost within arm's reach we find another but a few degrees above the freezing-point: rivers rising as if by magic from the lower depths of earth; springs so large that they are used for landings of the steamboats; mountains covered with stately pines and scrubby junipers; valleys in which the fields of grain wave in the gentle breeze like a golden sea; sheer precipices of a thousand feet, and mighty cataracts. Why should the hunter of nature's beauties and wonders travel thousands of miles across the rolling deep to find that for which his soul yearns when we have the grandest, the noblest scenery at our very door?

Lorella, Oregon.

J. F. W.

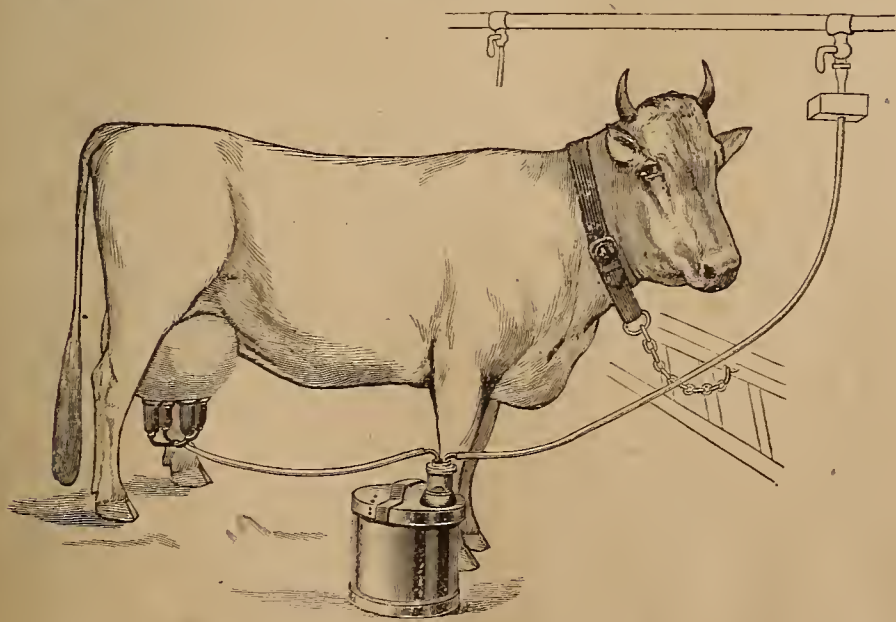
Can't Sleep, Why?

Because the nerves are weak and easily excited and the body is in a feverish and unhealthy condition. Nerves are fed and nourished by pure, rich blood. Hood's Sarsaparilla gives sweet, refreshing sleep because it purifies and enriches the blood and builds up the system.

Hood's Sarsaparilla

Is the best—in fact the One True Blood Purifier. All druggists. \$1; six for \$5. Get only Hood's.

Hood's Pills cure liver ills, easy to take, easy to operate. 25c.



as the cow is milked. The pulsator contains a small vibrating vacuum motor and the power to operate the valves in the box, and produces the pulsation. The pulsations do not extend to the milk-pail, as the end of the milk-trap that projects into the pail has a rubber ball which acts as a valve and prevents the pulsations to descend below into the bucket.

One man with six sets of milkers can milk fifty cows an hour; a horse on an ordinary tread-power can, with two men to attend, and twelve sets of milkers, milk one hundred cows an hour. The pails or cans are air-tight, and thus exclude the foul air, hair, filth, etc. There are ten sets of the apparatus at the hospital, and the men in charge of the barns think the invention is a valuable one.

During the public test in question the

The bed in my garden is about sixty feet long and three feet wide. It has just one row of plants set through the middle from two and one half feet to three feet apart. It is now five years old, and furnishes a good mess for a family of five or six every two or three days. My way of keeping it in good, easy-working and producing condition is very simple, and the work spent is a paying investment. In the fall or winter, whenever a sufficient quantity of fine horse manure is available, I give it a light dressing of the same. As soon as the ground can be worked in the spring the bed is spaded up and the manure turned under. I use for this work a six-tine spading-fork, generally called potato-fork. If the bed has been properly started, this spading can be done eight or nine inches deep; but we have to be careful not to

Our Farm.

THE POULTRY YARD.

Conducted by P. H. Jacobs, Hammonton, New Jersey.

SYSTEMATIC WORK.

TOO much work and no pay discourages all who look forward for the best results, and it is safe to claim that a great many persons who keep large flocks do more work than they should be compelled to perform; not that work should be avoided, for only work will enable the poultryman to derive a profit, but there is no reason why such work should be drudgery, or become so disagreeable that one should dread to do the duties assigned. No matter what the work may be, if one has several hundred hens, and gives his whole attention to business (poultry), a regular routine can be followed; but for a small flock of not over twenty hens it does not pay to spend several hours in the poultry-house. It is just such duties that have disgusted many, and only those who keep fowls for pleasure and have plenty of time to spare can afford to lose the time devoted to a small lot of hens. But much of the work is made; that is, more work must be done because it is not done right. The cleaning of the poultry-house is a job which no one enjoys. To go into a poultry-house on a cold day and pick and scrape the droppings, inhaling the dust and getting dirt on the feet and dust on the clothes, is more than should be done unless the hens are returning a fair compensation therefor in eggs. It all depends upon what the attendant does and how he cleans the poultry-house. One who understands his business will clean the house with a broom, and use nothing else. First the house is thoroughly cleaned and dusted; then dry dirt is sprinkled under the roost on the floor. On this are placed leaves or cut straw. Instead of cleaning the poultry-house once a week this work is done daily. With the broom the walls, roosts, tops and nest-boxes and floor are swept, the refuse removed and more dirt and clean litter added, which will require less than ten minutes for an ordinary poultry-house, thus also giving the fowls clean, dry quarters and assisting to ward off disease. The same in feeding: first learn, by feeding, how much the fowls should have, and scatter the grain in clean litter, and the work is done. Have a place (on the manure heap is best) for the refuse litter, so as to be able to dispose of it handily. Fowls kept in this manner will lay, and to clean the poultry-house daily will be less difficult than to wait until a large amount of filth accumulates to invite disease.

FORAGING AND PRODUCTION.

The true way for the farmer to keep poultry is to give the fowls the run of the farm, but not allow them access to the barns and stables. When the hens are compelled to lay in horse-troughs or hay-mows it denotes that something is wrong. They seek comfortable places, and if provided with such they will accept them. When the fowls have free range they become general scavengers, and not only consume a large portion of waste substance, but also clean away matter that would not be desirable. As gross feeders a flock of ducks will be as serviceable as hogs, as they will eat anything in the shape of animal or vegetable food, and seek it wherever it can be found. The distance traveled by a hen during the day, from early morning until dark, is much greater than may be supposed—probably a mile or two—and it is this exercise that keeps her in condition. When she is deprived of this advantage she is liable to liver disease and other ailments incident to idleness and overeating. Really the hen on the range eats more than the one in confinement, but eats little at a time, which is digested, because the crop is never too full and the digestive organs are not overtaxed. Then there is a greater variety of food, the hen securing worms, seeds, grass and other substances. Turkeys will forage over a great distance, and they seldom miss anything that can be utilized, spreading out as though to work over the ground systematically. To feed the fowls under such circumstances is to injure them instead of conferring benefit, as they will work less, because they soon learn to expect help. They will in a short time adapt themselves to the circumstances imposed upon them, and become less useful without giv-

ing as many eggs. In winter they must be assisted, but in warmer weather they require less food for bodily support, and are better prepared to produce eggs. When the weather is warm the hens begin to lay, as every farmer knows; but it is because they get more exercise, require less food, to supply animal heat, and secure a greater variety. Save the food, and make eggs pay by getting more of them, which can be done when the hens have good foraging-ground.

PRICES AND QUALITY.

Farmers have learned that they cannot afford to keep any kind of poultry that does not bring the highest prices to be obtained. No matter how low the regular quotations may be, there are sometimes good prices paid, as the very fact that the supply is abundant induces buyers to select more carefully, because they have a larger amount from which to do so, as there is no sentiment or favoritism shown in trade when the buyer desires the best to be had. The farmer who gets into the market with a choice article will secure the highest price. It may be an admonition that is disregarded, but the time will come, or has already arrived, when the farmer cannot afford to ignore the value of the breeds; and he must also give his personal attention to the poultry, for by so doing he can keep more fowls and have fewer losses of chicks. Whether the fowls are sent to market alive or dressed, the condition in which they reach the stalls will have much to do with the prices obtained. It will be useless to keep good breeds, or even common stock, if the advantages are to be sacrificed at the last moment by carelessness in shipping. The wise farmer will not fill a coop with fowls of all kinds—roosters, hens and large chicks—to be sold in one lot, as the price will be influenced by the inferior birds. The maxim that "a chain is no stronger than its weakest link" applies also to the shipping of fowls to market, as the very best will be governed by those that should not have been sent at all. Fat hens sell on sight, and should be separated from the males, while poor hens and late chicks will not bring good prices at any time. No farmer should send male birds to market, as they seldom bring over five cents a pound. If they are to be disposed of, let it be done on the family table or bury them at the roots of grape-vines as so much fertilizer, as they will be more serviceable in any manner than to pay expressage on them only to give them away.

EXPERIMENT FOR RESULTS.

When a new breed is produced and tested for its laying qualities, the birds should be strong specimens of the breed, as there are good and inferior birds in all breeds. If the hens begin in the spring and lay until fall, then ceasing until the next spring, it will be well to know how many eggs they have laid, and also the cost of the eggs, for it must be admitted that under certain conditions the fowls may give a fair profit and yet not lay eggs during the winter, as the food during the warm season, when the birds are on the range, may not cost anything at all. The point with all new breeds is not so much as to the number of eggs laid, but the hardiness of the birds. To have them endure severe winters, and not become readily subject to roup and other ailments, is one half of the success, as it does not pay to have a portion of the birds laying while the others are being "doctored" with the latest remedies. Test all breeds in winter, both for hardiness and for layers, as the spring and summer conditions are usually favorable to all breeds.

SELLING BY WEIGHT.

The best producers are those that yield the heaviest weight of eggs, and not always the largest number. It is more difficult for a hen to produce ten eggs that weigh one and one fourth pounds than to lay a dozen eggs that weigh a pound; but poultrymen do not take that view of the matter, and more often sell the best producers, keeping those that lay the largest number of eggs, even if the eggs are small. It is claimed that as eggs are sold by the dozen there is more money in numbers than in weight, but such is not true if one will seek a market among those who prefer to receive the value of their money. Eggs are like other articles—size and appearance will sell them to advantage if the farmer will endeavor to sell to consumers himself.

THE BEST FOODS SHOULD BE PREPARED.

It is economical to procure cheap foods, such as screenings, when they can be bought at a low price; but it will not pay to attempt to keep poultry by the use of damaged or musty food as a constant diet. Fowls are more fastidious than may be supposed, and will frequently remain hungry for a long time before they will eat food that is not satisfactory. Even when wholesome corn is given constantly there arrives a time when the hens will take no notice of it if they can get other foods. The object in feeding fowls is to procure eggs, and the best food to be had will not be expensive if the hens are laying; but if they are producing no eggs, then any kind of grain is expensive, more especially the kinds that are not relished. With present prices of grain there can be little saved in buying that which is musty, and it may happen that damaged grain is not worth the expense of hauling. When the hens do not lay it may pay to buy lean beef for them, as a change from grain to meat often proves an advantage. But no matter what kind of food is used, if the hens are giving good work, the cause should be secondary.

REMEDIES AND DELAYS.

The best remedies are sometimes the cheapest and most easily applied. When the busy farmer is advised to resort to remedies for diseases which require some time to procure and prepare when he cannot afford to do so, he will procrastinate or abandon the attempt. For that reason it is better to suggest something which can be applied immediately and which is conveniently within reach. For instance, nearly all poultry-houses will be infested with lice in summer, and sometimes in the spring. If a few hours of vigorous warfare is given, the vermin may be kept down, but it is frequently the case that the farmer has no time to send for and mix remedies. Now, one of the best things to do, and which can be done in a few moments, is to make an application of boiling water which has been "strengthened" with rock-salt (or any kind of salt preferred), and apply with a watering-can. The hotter the water applied the better, as it will kill any insect it touches, and the salt will assist in destroying the eggs of lice. Better remedies may then be tried, but never delay with lice.

EARLY AND LATE LAYERS.

Those who have early pullets will now anxiously be expecting them to lay, as the Leghorn pullets hatched will sometimes commence when only five months old. It is really of no advantage to have the pullets begin too soon. If they start about September, and lay during the fall, they may rest over during the winter, and not begin again until early spring. The same with hens, which can be more serviceable if molting during September and the first part of October. They will be in good condition to produce eggs in November, and if properly kept, should lay all winter. Hens will only lay a certain number of eggs in a year, and there are periods of rest, either when they are molting or hatching chicks. If they produce the eggs in winter the profit will depend on the location to market. It may, however, be considered that in some sections it will pay better to have the hens lay in summer, as the cost of support and production is less; but it is perhaps better, if they are to take "resting" spells, that it be done in summer.

USE LEVEL ROOSTS.

The old-time step-ladder roost, with one round four or five feet from the floor and the others lower until the lowest is near the floor, takes up a large share of space in the poultry-house, and is unserviceable, as the hens will instinctively go upon the high roosts in preference to the lower ones, some of the fowls being forced down while others are injured by jumping off in the morning. It is to high roosts that bumble-foot and lameness may be attributed, and it is cheaper to have low roosts, all on the same level, than to doctor fowls for lameness.

The Reliable Bantling is the latest product of the Reliable Incubator & Brooder Co. of Quincy, Ill. It is self-regulating and of 50 egg capacity. It is made on the same scientific principles that are employed in the construction of the famous Reliable Incubator, and is very easy to operate. Write this firm for a circular describing fully their new Bantling, and also their 50 chick "Reliable Nursery" Brooder and their large poultry catalogue containing much information of value to poultrymen, particularly those who breed poultry on the farm.

INQUIRIES ANSWERED.

Bantams.—A. S. E., Chestertown, Md., writes: "Is it too late to hatch Bantams if chicks come out in August or September?"

REPLY:—Bantams can be hatched at any time, as growth is not desirable; the smaller the bird the greater its value.

Overhead Draft.—J. R. G., Brownsville, Tenn., writes: "I have a hen that gapes constantly, making a faint sound every time she opens her beak; otherwise she is well, and eats well."

REPLY:—Perhaps due to overhead draft when on the roost, and also she may be in a fat condition. Give two or three drops of camphorated oil once a day.

Ground Meat.—J. S. R., Ancora, N. J., writes: "In feeding the commercial ground meat to poultry, is it better to give it alone or mixed with grain?"

REPLY:—In summer, when grain is not necessary, the ground meat may be given to fowls for the night meal; in winter it may be used with equal parts of corn-meal to advantage.

General Debility.—S. H. M., Birdseye, Ind., writes: "My hens become very poor, gape, and finally are unable to walk; but their appetites are good."

REPLY:—You give no details of how you manage them. The cause may be due to mites and the large lice, or it may be an advantage to change the diet, removing the males from the flock.

Inducing Hens to Molt.—H. M. O., Somers, B. C., writes: "Which is the best mode of inducing hens to molt early, and finish the process in a short time, so as to begin laying before winter sets in?"

REPLY:—The feathers do not begin to drop until they reach a certain stage, or "ripening," which cannot easily be forced; but the use of oily foods, such as linseed-meal, assists in hastening the process.

Loss of Turkeys.—"My turkeys are infested with lice, and were doctored with insect-powder. They appear sleepy and droopy, and finally die."

REPLY:—The probability is that the large lice on the skin of the heads and throats do the damage. A bath twice a week with sweet-oil, using only a little, as too much is injurious. Rub it in well on skin of head and throat, and also on the legs and around the vent.

Destroying Lice.—E. S. F., Waverly, Kan., writes: "Is there not some practical method of ridding hens of lice without so much picking, greasing, dusting, etc.?"

REPLY:—There are advertised "dips," with directions, and remedies are given in this journal frequently. If the poultry-house is kept clean the fowls will soon rid themselves of lice. It is difficult to prevent lice, however, without considerable care and labor.

Turkeys for Breeding.—M. R., Decatur, Ill., writes: "Are young turkeys twelve months old equal to older ones for breeding purposes, and how about using old gobblers and young hens?"

REPLY:—The gobbler should be at least eighteen months old. Hens that are two years old should be preferred to those younger, as chicks hatched from eggs laid by turkey pullets are not as strong and hardy as those from eggs laid by turkey hens.

Gapes in Chicks.—N. A. H., Lowell, N. Y., writes: "I have tried turpentine, sulphur and all the specified remedies for gapes, but continue to lose chicks. I move the coops and sprinkle lime on the ground."

REPLY:—When ground is infested with the gapes (or its cause) it is difficult to prevent it. Old locations are the places favorable to gapes. The only remedy other than using new ground or keeping the chicks on boards is to insert the tuft of a feather down the windpipe, give it a twist, and pull it out quickly.



HEAD LICE

on chicks and Poults are thick this summer. Lambert's Death to Lice ointment will fix them and brighten the broods. Trial size, enough for 50 chicks, 10c. postpaid. Book Free D.J. Lambert, Box 303, Apponaug, R.I.

LEE'S LICE KILLER kills all lice, mites, fleas, etc., on poultry and stock. Does away with the old fashioned way of dusting, dipping, greasing, etc. You paint the roost poles, the lice killer does the rest. A few cents' worth will do the work of a dollar's worth of insect powder and with no labor. Pamphlets and circulars free. 64 page book on "Vermin" and diseases of Poultry and stock free for 2c. stamp. **LEE'S TONIC POWDER** makes the hens lay. **GERMOZONE** is a cure for nine-tenths of the diseases of poultry and stock. Our books tell all about them, with testimonials. 1200 agents in every state in the Union and more wanted. Write us. **GEO. H. LEE CO., EXETER, NEBRASKA.**

17c. PER ROD Is all it costs to build the best Woven Wire Fence on earth with our Automatic Machine. We sell the Famous **COIL SPRING WIRE** CATALOGUE FREE. **KOKOMO FENCE MACHINE CO., Box 67, Kokomo, Ind.**

Send us 50 Cents (postage stamps taken) and we will send you this **HANDSOME VIOLIN COMPLETE WITH BOW**, by express C.O.D., subject to examination. If found a **WONDER FOR THE MONEY**, pay the express agent balance \$1.25 and express charges. Our special price for this regular \$5.00 violin with **WE SEND FREE** some Piano, Organ and Musical Instrument Catalogue. **ORGANS \$22.00, PIANOS \$121.25, GUITARS, MANDOLINS** and other musical instruments at factory prices, all subject to **FREE TRIAL** before payment. Send for catalogue to-day. Address, **SEARS, ROEBUCK & CO. (Inc.), CHICAGO, ILL.**

Our Fireside.

THE SIXTH SENSE.

The face of yesterday is not the same to-day,
An undefined but different spell lies in the features' play.

It may be gay or sad, a tint of color more or less,
A sparkle, or a shadow new, the eyes and cheeks express.

A tone not heard before rings in some dear one's voice,
That brings a sharp prophetic pain, or makes the heart rejoice.

One knows not why. One only feels some hidden cause
Must be

In body or in mind, to work the change not all do see.

Some few with intuition's ready power can trace
In man or child these subtle changes of the voice or face.

With this sixth sense, almost divine, can see and hear
The things not manifest to common eye and ear.

Methinks it needs Love's listening wait and watchful sight
Faint undertones to interpret and dim sights to read aright.

Love, then, must be this added sense, or sum of all combined,
And love for every living thing the power to save mankind.

—Good Housekeeping.

A DISCIPLE OF CUPID.

BY SUSAN HUBBARD MARTIN.



THE morning that her usual letter came from Idaho Mary sat with folded hands for fully a half hour. This was very unusual for her, for she possessed all a New England woman's abhorrence of procrastination. But something had evidently occurred this morning to throw her out of her usual routine. After a long and thoughtful silence she replaced the letter in its envelop, and rose slowly to her feet.

"I'll do it," she murmured, tenderly, gazing around the cozy little room. "It will be a sacrifice, but," and the dimples blossomed rosy, "what woman would not make a sacrifice for the man she loves?"

Fifteen minutes later the room was a chaos. The white and gold china was taken every piece from its pretty glass cupboard; the Japanese tea-pot, brought from sunnier skies than ours by Mary's uncle, Captain Bligh, was carefully packed, and Mary had even commenced to pull the tacks from the red and green Brussels carpet of the best room, when her sister entered from her home across the way. She surveyed the scene of devastation with mingled horror and surprise. Mary smiled involuntarily.

"Heavens!" she gasped at length, "what are you doing? The china-closet turned inside out, the carpet up and the curtains down, half the pictures off the wall and— and—" She ceased in sheer amazement. Then suddenly, "Are you daft?"

Mary was on the floor, with a mouthful of tacks. Laying them carefully in a saucer, and arising from her prayerful posture, she said, with a resolute air, "Crazy? No, Anne, I am not crazy." Then more slowly, as though the effort pained her a little, she continued, "I am saner than I have been for nine years." Handing the letter to her sister, she said, impulsively, "Read that." Her voice trembled slightly, and a tiny tear glistened hesitatingly on the rosy cheek. Then in a firmer tone she said, "I am going out to Idaho, Anne. You will understand me better when you read the letter. I made up my mind quickly enough when I read it. If the mountain cannot come to Mahomet, Mahomet can go to the mountain."

Anne gasped convulsively, and sat down in a heap.

"Why," she cried in a semi-stupor, "it is three thousand miles away! There's Indians and bandits and outlaws and buffaloes and mountain lions and hermits and—and lots of awful things out there! You will certainly be killed or scalped, sure. You shall not go a step!"

"You do not mean that, Anne," said Mary, gently. "You are too happy with Daniel to condemn me to a life apart from John. Read what he says, dear." And Anne read:

MY DEAREST MARY:—This is Sunday, the hardest day in all the week for me to live through. In spite of myself my thoughts will wander back to the dear old Bay State, with you for a center. As I write I can hear the dismal howl of the coyote above the moaning of the night wind. I am accustomed to being alone, to thinking alone, and to drag out each weary day, which is such a monotonous duplicate of the day before, but to-night I feel more desolate than ever.

There comes a time in every man's life when hope spreads her rosy wings and soars away. To-night I seem to see myself for the first time as I really am—a sad man, a hopeless man, and, worse than all, a poor man. I have hoped—how much you will never know—for that sweet time to come when I could call you my wife. Ah, Mary! can you guess, I wonder, how that sweet name thrills me? But the prospects play out, and work I ever so hard, everything seems to be against me. And so, Mary, I offer you your freedom.

It will be nine years to morrow since I gave you the tiny ruby ring. Nine years! What fond hopes I then cherished for our future! And now, now—God! after all I have endured, I am poor, poorer than I was then, in those other days, when life was one grand song, and you its sweetest warbler; when our dreams for the future were an unbroken chain of tinted vapors and everything converged to one common center, with you as its centrifugal point.

And I am nine years older—nine years! Thirty-five years old, Mary, and you are eight years younger. You deserve a better fate, and though I love you, God only knows how much, I cannot come to you, nor will I ask you to come to me. Three thousand miles between us! Do you wonder why I lose hope? Mary, Mary! the thought of giving you up breaks my very heart, but I must consider you first. Could you, would you, come to me? But no, I will not ask it. I offer you your freedom, but it seems to me, as I sit here so lonely and desolate to-night in my little cabin, that if you take it, it will kill me.

Write at once, darling. I never needed comfort as much as I do to-night. Your friend and lover,

JOHN.

Anne folded the letter up carefully, tenderly. "Poor fellow!" she said, "feelingly; then impulsively, "Go, Mary—I cannot blame you—go!" The voice faltered, the cheeks flushed, and a torrent of tears burst from the eyes that shone with the light of a holy love. In a moment Mary's arms were about her neck.

"The parting is hard for us both, Anne," said Mary, brokenly; "harder than we imagine. But you will feel better over it by and by. Dry your eyes, dearest; it might not be for so long, after all."

If Mary was making a sacrifice for John, her sister was certainly making a sacrifice for Mary. It was a sacrifice all around. A sacrifice on love's altar, and bravery does not always ask heroic deeds of valor as homage. So the women dried their tears, and packed away the things together.

John Reynolds and Mary Bligh had known each other from childhood, and John could not remember the time when he had not loved Mary. But nine years before this story opens, after the little ruby ring had graced Mary's finger but a short time, John conceived a violent ambition for a better future than the old Bay State promised, and, like hundreds of other inexperienced men, made buoyant by the hope of brighter days, he said farewell and started westward.

First to Colorado, then to Montana he drifted, and for the last six years had patiently delved into the lap of Mother Earth in the mountains of Idaho. Brave in the hope of winning a fortune for his waiting sweetheart, he worked as he had never done before. Toil-grimed, with hands blistered and sore, with aching limbs, and at last an aching heart, he wooed Dame Fortune faithfully, but she did not smile. And John in his lonely mountain cabin, with gorgeous sunsets above and golden store below him, grew sick at heart as the days and weeks and months passed swiftly by, leaving him no better fitted to provide for Mary than before.

Mary, too, grieved; not for the unfound fortune, but for his late returning. She was very hopeful, and made herself unusually busy, however, and managed to buoy her courage above the fears and disappointments which filled the intervening years. The girls that were girls with her in other days married, as girls will. Some of them with sturdy little ones to overjoy and distract. But Mary did not fret. There was so much to do, and so many to assist, it took her thoughts into healthy channels and kept her young.

Her cheeks were quite as round and firm, and her bloom as delicate as in the old days when John accompanied her home from the tiny white meeting-house over on the hill. She was decidedly as pretty a woman as she had been a girl. Auburn hair, blue eyes, and a form as plump as nature can make it without exceeding the graceful symmetry of a perfect figure. On account of these same rosy cheeks John had called her his Highland Mary, and there was at this moment hanging on the wall of Mary's room a little steel engraving of Burns' first love, which John had given her in those happy days. It was a modest little picture in a neat walnut frame, but Mary prized it as she did nothing else in the old home.

Her parents had died during the nine years John had been away, and Mary had, besides the snug little home, a neat bank account left by her provident father. So there was no one to consult if she chose to join her lover away out there in the wilds of Idaho. "If he won't marry me, I can return," she said one day, gently, half laughing, half seriously. But in her heart of hearts she did not trouble much. She felt assured of the greatness of John's love.

"I shall take all the china, sister," she said, "besides all the kitchen things, my old clock, the red and green Brussels carpet, mother's quilts, some ruffled pillow-cases, the table-linen, my silver forks and spoons, my machine and—and my big bureau. My little rocking-chair must go, too. The other things you can have."

Anne looked at her solemnly for a moment, and began, impressively:

"I want you to promise me faithfully that when you get to that Idaho place you'll change your dress every afternoon, always set the table with a white cloth and never

neglect to crimp your hair. Do not let those western outlaws make you one of themselves, now, will you?"

The look of appeal was pathetic, and the idea of a white table-cloth and silver forks in a miner's shanty was grotesquely puritanical. Anne was very innocent. The goods were finally shipped, the old home was ready for a new tenant, the key turned over to Anne, and the first great change in the simple life of the brave little New England woman was about to be realized.

Three thousand miles, and Mary had never been more than twenty away from her home in all her life; but love dwelt warm within her breast, and the thought of meeting John after so many long years made the parting less severe and the journey all the sweeter. A pretty picture, too, was she in her dark green traveling-gown, with rosy cheeks and white, even teeth. On she traveled, on and on; it seemed she would never get there. Then one morning she awoke to find the air numbing, a strange sense of suppressed exhilaration pervaded her whole being, and peeping out of the curtained window, she obtained her first glimpse of the mountains—grand, majestic, snow-capped. The effect was weird, and she felt a strange emotion, a sort of awe, a veneration; and struggling with this new emotion was the thought that now, at last, she was nearer John, and her heart beat fast with joy.

All that day and all night she traveled in full view of those impressive cathedrals of nature, until she could scarcely suppress her delight, and sang and crooned for very joy; and the next day, in the cold dawn of a gray morning, she reached Red Rock, John's post-office.

Two minutes later Mary was alone on the little platform. Objects were very indistinct, and the light from the oil-lamps here and there confused her. At last, as the gray light grew stronger, Mary could see more clearly. And what did she see? Mountains, mountains, mountains—one tier above another—endless, sublime, majestic. And out there, beyond the gray of the chill dawn, beyond the haze which overhung the shimmering peaks, beyond the stony road winding far away into the heart of this vast assemblage, her John was waiting for his answer. What would he think if he knew how near she was to him now? The cheeks flushed rosy, and a great light shone from her eyes that seemed to transform the features of that sweet face into a halo of perfect radiance. Then for the first time she felt frightened at what she had done, but the bliss of that near meeting was sensed in some occult way, and her fears were quieted. As she looked more closely about her the outlines of a long, low white building grew more distinct, and Mary bent her steps thither.

"Somebody," thought she, "will surely know where John is," and reaching the place, which proved to be a hotel, she found the landlord busying himself with the fire, and from the look of his eyes was evidently not long out of bed. He was a tall, lank man, with a grizzled and good-natured face.

"Know John Reynolds?" he echoed, cheerily, in reply to Mary's query. "I rather reckon I do. Nobody knows Jack better than I do. First-rate feller, too," he added, warmly. Then confidentially, "Yer see, we keep the post-offs besides the hotel, and it 'pears ter me that Jack's letters from some'ars in Massachusetts is nigh punctual gitt'n hyar." Then with a sudden lighting up of his honest face, for he had been eying Mary quizzically for the last few moments, he added, "I shouldn't wonder ef you war'n't that very sweetheart!" Mary reddened, as every modest girl would do, but being brave in the strength of her love, she replied, with becoming candor:

"He could not come to me, you see, so (blushing again) I resolved to come to him."

The landlord looked down from his eminence at Mary's gentle face. There was infinite kindness written all over his weather-beaten features, and without a word he leaned over and grasped Mary's hand warmly in his own.

"God bless yer!" he said, fervently. "Yer have my best wishes. Gee, Jupiter! But how tickled Jack will be!" His face was radiantly illumined by that great human interest and fellow-feeling which swells into the majesty of a noble virtue in the breast of every true-hearted Westerner, and which burns so feebly in the overcivilized East. Then after a few moments he added:

"I don't know fer sure whether he is up at his place or not. He did say something 'bout gitt'n on to Almond City fer supplies, and that's seventy miles from hyar. But I wouldn't worry," he added, noting the shade of disappointment passing over Mary's features; "maybe he ain't started yet. There ain't no store to speak of hyar, yer know, and it takes quite a spell to go over to Almond City by team—most two weeks. After breakfast I'll have my boy Ned drive you over to Ripley's cabin. That's half a mile this side of John's. They'll be sure to know all about his whereabouts. Ripley has a wife and grown girl. They'll be mighty glad to do all they can fer you. Take off yer hat and have some coffee, do."

During this recital Mary's face had fallen lower and lower. While she tried to be brave, she felt very much disappointed, and a strange choking feeling took possession of her heart.

"How far is it," she faltered, "to Mr. Ripley's?"

"Oh, not so very far—only 'bout seventeen miles," returned the landlord, cheerily. "But my Ned's a good driver, an' he'll git you thar 'bout noon. I reckon, ef you start right away. And ef you'd like my company," he added, tenderly, touched by Mary's weary face, "I'll go with you."

Mary accepted the offer gratefully, for his kind face already seemed like that of an old friend. He did not make much of a miscalculation, either, for it was only fifteen minutes after twelve o'clock when the team from Red Rock hotel halted at Ripley's cabin. Her new-found friend plunged to the heart of matters at once.

"Is John home, Mrs. Ripley?" he called to an angular woman with a sharp but good-natured face who stood in the doorway. Mrs. Ripley glanced curiously at Mary for a moment, and answered, dryly:

"No; he started yist'd'y to Almond City fer supplies."

Mary sighed audibly. She felt very lonely and desolate out there in that strange country, and all the more so when she knew that every moment was taking John away from her further and further. She felt a trifle reassured, however, when the landlord said, with a smile:

"Well, this hyar lady ez come all the way from Bosting ter see Mr. Reynolds—on business," he added, with a merry twinkle in his eye. "Will you take her in charge till he returns?"

The reply was to the point.

"In course I will, and shall be very glad. Our latch-string's always on the outside to any of Jack's friends."

Mary took her toiled, gnarled hand affectionately in her own, and said, feelingly:

"Thank you. I hope I shall not be much of a bother." And as she looked into the kindly eyes of this hard-worked woman, she thought she detected something in it that reminded her of Anne. This prompted her to sudden confidence, and with charming candor she continued:

"We've been engaged for nine years, and," very softly, "I came out here to be his wife—if he will let me—and—and—I wanted you to understand."

For answer Mrs. Ripley took the precious little woman in her arms and gave her an almost hear-like hug. Her remarks were much the same as the landlord of Red Rock hotel had made, as she looked admiringly at Mary's pretty, womanly face, and said, warmly:

"God bless you!" And that was all.

Then after a moment's keen inspection she added, "You do look like that picture John has shown us so many times. I can see the resemblance now clear enough. Well, well! All the way from Massachusetts, you say? My, won't John be surprised, and happy, too! He's seemed downright blue of late!"

The next morning, with Lizzie Ripley at her side, she walked over to John's cabin, a half mile beyond. The door was not locked, for that is against the custom of western mountaineers. She pushed it open gently, and stood upon the threshold over which her Jack had passed so many times. A great throb of pity arose in her warm heart as she looked upon it.

"And so this is the spot where John has worked and lived so long?" she thought, and her eyes grew misty, and the little picture of Highland Mary which hung over the rough-hewn mantelpiece faded away from her sight. But she resolutely choked back the tears.

A miner's cabin! Who could, after seeing one, ever forget it? Two rooms built of logs, with a fireplace at one end. The floor was rough-hewn boards, and the ceiling consisted of poles laid across the top and thatched with straw. A hunk was built into the wall of the cabin, covered with blankets and a skin or two of the mountain bear. A rough-hewn shelf for the few dishes, a few low stools and a rusty little cook-stove. That was all. Mary looked it all over wistfully, tenderly. To her thrifty puritan training it looked dreary, comfortless, cheerless. After a moment's pause she walked to the open door, and looked out over the mountains. Was she sorry? Did she regret this long, weary trip? Almost instantly the concluding words of John's last letter flashed before her: "I offer you your freedom, but it seems to me that if you take it, . . . it will kill me."

"Dear, dear John," she murmured, happily. "I'm glad—I will be glad—I have come." She turned suddenly and met Lizzie Ripley's eyes. "I am going to try to make a little home of this, Lizzie," she said. "Do you think I can?"

Lizzie's honest eyes took in every detail of Mary's trim, round figure. "Do I think you can? Don't I, though!" was the emphatic reply. "There's a heap of knack in them little hands of yours, and I know it."

"Wait and see," answered Mary, quietly, for her heart beat fast and hopefully, and

the tears that were faintly visible on the delicate lashes were all that remained of that ordeal, for her heart was filled with hope and her eyes with the sunshine of an eternal love. "Two weeks to work in," she continued, smilingly. "I can do lots in two weeks, and when John comes home he—he won't know the place, will he?"

The boxes came a few days afterward, and Mary had the Ripley boys bring them over to John's cabin. Every day she put on her neat print dress and walked over there, and called all her ingenuity into play in the beautifying of its interior. Many a less brave-hearted woman would have given up in despair, but the very absence, so painful, yet so sweet, strengthened her in her new work, and gave inspiration to the deft fingers in their loving work.

The rooms were papered with news sheets, and while the effect was not, of course, gorgeous, it was at least clean and wholesome. Lizzie Ripley washed the floors, and Mary tackled down the red and green Brussels carpet. Tom, the elder of the two Ripley boys, grew interested also, and in the goodness of his heart made two smooth shelves. These Mary covered daintily, and lo! the china reposed in state. The little window shone, too, from much polishing, and adorned with the lace curtains that once graced the windows of that far-away eastern cottage they lent an added beauty to the now thoroughly homelike surroundings. The massive old-fashioned bureau, with its oval glass, was placed to the best advantage, and the tiny sewing-machine occupied one corner and the rocking-chair the other corner of the sitting-room. Mary even made the framework of a lounge, and cushioned it herself. When it was finished she threw over it a pretty cover, made some soft pillows from others she had brought, and threw them around invitingly.

"What do you think of it, Lizzie," she asked one afternoon, tired but happy. Lizzie's beaming face testified her great appreciation. "Like it?" she echoed, wonderingly, as though anything else could be expected of such a metamorphosis. "Like it? Why—why—it's beautiful! But then I knew the minute I set eyes on you that you had the knack of making the most out of the least, and as for Mr. Reynolds, I wouldn't ast nothing better than to watch his face when he first sees this room!"

Mary walked over alone the next afternoon. There were a few last things to be attended to, for John might come at any moment now, and she hurried the final preparations through in double-quick time. She wore her gray dress that afternoon, with jacket and hat to match. The bracing mountain air had brought to her cheeks that soft flush which makes a woman so irresistible who has just come from the East, and under the gray hat her blue eyes beamed softly.

The little cabin already seemed like home. The little cook-stove, which had looked so forlorn and forgotten in its coat of rust, fairly shone with energetic polishing, and smiled welcomingly to all comers. Clean curtains hung from the shelves. A braided rug was laid beneath them, and the table itself was resplendent in its spotless cloth.

In the next room Mary laid aside her hat and jacket: there was a cushion for the lounge yet to finish, and a picture or two to hang. One hour passed, and yet another. Lower and lower sank the sun, and finally, just as the last golden rays were settling behind the mountains, a tired-looking man with a tired team of horses drove slowly up the winding road. Opposite the cabin he stopped, jumped out and started up the path. He was a rather tall man, with hair growing gray about the temples, a handsome face lighted by a pair of honest, affectionate eyes. He was dressed in a brown suit, white now with dust, a flannel shirt, and wore a pair of cowboy boots with their queer, high heels. Surmounting all this was a gray sombrero, and a red kerchief was knotted carelessly about his throat. He walked slowly toward the house, as if he were very weary, as if he dreaded the loneliness that awaited him.

He opened the door hesitatingly, saw the changes everywhere about him in a single sweeping glance, started back amazed, staggering. Mary had mounted a box to hang a picture, and stood there speechless, immovable. She knew that step, even after nine years. To John's bewildered vision she looked like a veritable angel of light in the cozy little room. Just above that auburn head hung the picture of Highland Mary. John rubbed his eyes bewilderedly, staggered back a step, then rushed forward and caught her rapturously in his arms.

"Mary! Mary!" he cried, brokenly, "is it—can it be really you, or am—I—am I—dreaming?"

Mary was none the less stupefied with joy, and without a single word threw both arms passionately about his neck, and lifted her face to meet the rapture of his kiss.

"And—did—you think I—I—wouldn't come?" she murmured, brokenly, after she had recovered her speech. "John—John—please don't cry! Don't—I can't bear it!"

John was speechless. The joy of the meeting to his desolate heart had been too great, and bowing his face upon his sweetheart's neck sobbed in very joy.

A beautiful purple twilight was settling over the mountains as Mary and John prepared to walk back together to the Ripley cabin, and over it all was the love of these two—out there in the wilderness—buried in the fastnesses of that never-ending chain of mountains. They were very happy.

As they stood upon the threshold drinking in the joy that hovered tenderly above, about and around them, a small procession filed gaily up the little path. Mrs. Ripley and Lizzie first, then Tom and Andrew; next came the landlord of the Red Rock hotel, with a tall, bearded man, and last of all Mr. Ripley himself with little Agnes.

"Howdy, John?" the whole party called out, lustily. Then the genial landlord stepped briskly forward. "Light the candles," he began, cheerily. "Heard you passed through Red Rock to-day, John," he continued, "but could not catch you, after all. I knew, however," with a sly twinkle of his beaming eyes, "that you'd need a justice of the peace, so I fetched Bill Simmons along. Too bad Red Rock can't muster a preacher for this occasion, but what's the difference so long as he can tie a knot? His knot's as fast as anybody's, and his blessing's as good as a preacher's, any day, isn't it, Bill?" For answer Bill laughed blushing, and shambled awkwardly to the little seat at the door of the cabin.

The landlord peeped curiously into the room, gave a gasp, and said, "Zounds, but what a change!" Then turning to John, slapped him gaily on the shoulder, and said, heartily, "Walked right into the surprise she prepared for you, eh?" Then, as the light of the candles fell upon John's glowing face, the good man started a little. "Great jolly-locks, John, how happy, how desperately happy that face of yours does look! Want to be wed here or over at Ripley's?" he asked a moment later. "You see, Bill and me is going on a big hunt to-morrow, and we won't be back for over a month, so," with a jab in the ribs, "there's no time like the present."

John looked inquiringly at Mary, who blushed slightly, and answered softly, "Here, please."

So right there in the little cabin, under the little picture of Highland Mary, Mary Bligh was wedded to the lover of her youth. The ceremony did not take long—only a few moments. In fact, strictly speaking, it wasn't any ceremony at all. It was a surprise party with legal accessories. After it was all over the rough, great-hearted mountaineers extended their hardened hands in hearty congratulations, and laughingly departed. Mary and John stood clasping each other's hands, and watched the party file slowly down the darkening road until a bend hid them from view. Then John suddenly turned and took Mary in his arms and looked tenderly, soulfully, earnestly, into her tear-dimmed eyes.

"And you're sure you're not sorry, wife, for this day's work?" he asked, huskily. "It's a poor home for you, sweetheart, after what you've been used to, but—but—it's the best I can offer, and with you in it a palace would not suit me better."

"Poor," she echoed, radiantly, "when we have each other?"

Her gaze wandered tenderly about the room, so crowded with mementoes of her other home in far-away Massachusetts. Last of all, she looked long at the smiling face of Highland Mary. The winning eyes seemed to smile a hearty welcome back again, and Mary, in the great shelter of her husband's arms, hurriedly brushed away the tear which had been gathering there since before the party had departed.

"I'm the happiest woman in all the world, John," she cried, "even in this log cabin among these great, lonely mountains, because—because," her voice faltered a little, "because—I—love—you!"

John could not reply, but he stroked the auburn hair very tenderly, with a full and thankful heart. The tiny clock ticked its very busiest, the candles flickered and a gust of wind blew them out. Across the snow-capped mountains the shrill scream of the coyote and mountain lion was borne in to them upon the swift wings of the night air. But Mary, brave and faithful Mary, only smiled. She clung tenderly to her husband. The long journey and the many days of hard work faded away in the rapture of that embrace. They were both very happy—very, very happy.

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ONE NIGHT'S ADVENTURE.

BY HELEN WHITNEY CLARK.



IT WAS cross when Fred came home one day—undeniably cross.

I am naturally of an amiable disposition, you must know; too amiable, in fact, for I am a perfect martyr to the whims of my friends, who impose on me shamefully, and take all sorts of advantage of my good-nature. But upon this occasion I was, as I will admit, as cross as two sticks, though, to be sure, I had had provocation.

"Tired and out of sorts, eh?" said Fred, putting his arm around me, and giving me a cheery kiss in spite of my forbidding looks. "What is it, girle? Perhaps I can mend the matter."

"You can't," I snapped. "It's this horrid house-hunting! I've walked and walked, until I feel like a regular tramp, and all to no purpose. The rent for any house we would think of taking was positively extortionate; and those that came anywhere near our means we would not even look at."

"Whew!" whistled Fred. "Then I don't see but we shall have to stay where we are for another quarter at least."

"Fred, we can't stay here," I whined. "I detest living in a flat. It's so noisy, and—awful! The man on the floor above is a car conductor, and splits his kindling and pounds up his coal at eleven o'clock at night; right over our heads, too, and—"

"I know, duckle," interposed Fred, "but if we can't better ourselves—"

"We must better ourselves," I pouted. "I'd rather live in a tent."

"Very well, my dear. If we 'must,' we must. I suppose, and no help for it," said my better half, with a good-natured grin, and as Ailsie announced dinner at that very moment, the discussion ended for the time being.

Fred and I had been married nearly two years, during which time we had alternately hoarded and lived in a "flat," and if I live to be as old as Methuselah I shall never be able to tell which was the worst.

My husband, Frederick Mortimer, Esq., was rate-clerk in the H. R. and Z. railroad office. He received a salary of sixty dollars a month, and as neither of us was extravagant in our tastes, we could have lived as comfortably as cows in a corn-field, if it had not been for the house-rent.

Fred could have contented himself anywhere, but I could not. I wanted a house to myself—no matter how small it was—with a plot of grass and a tree or two in the yard. And if I could have a small bed of plums and petunias and some morning-glories around the porch I should have been as happy as a queen.

But there were no houses of that description within walking distance of Fred's office, and in the suburbs house-rent was so high.

Car-fare, too, would have been quite a consideration, and Fred would have to buy his lunch every day, for he never would carry a lunch-basket.

So there we were, penned up in a "flat," where I felt like a prisoned bird beating my wings against the bars, and pining for the green woodlands and meadows.

The green woodlands and meadows, alas! I had never lived in the country, but I felt that, like Miss Julia Hampton, I had been "born to love pigs and chickens."

"Never mind, wife," consoled Fred; "when I get to be a rich man, a semi-millionaire, you know, we'll go to Arcadia, seventy miles from the city, where a number of the wealthy merchants live. They come to town to attend their business every morning on their own train, the 'Arcadia,' and—"

"Oh, Fred," I interrupted, my peevishness melting away like dew before the sunshine (for we had reopened the discussion as soon as dinner was over), "why couldn't we live out in the country somewhere along the line of the railway, you know? The house-rent would be so much less it would make up for the car-fare—you could get a hundred-mile ticket, you know. And I could have a garden and keep some hens, and we'd have our own fruit and strawberries just off the trees—"

"I don't really think strawberries grow on trees, my dear," interrupted Fred, quizzingly. "Oh, well, you know what I mean." I went on, too much excited over my plans to pay much heed to the construction of my sentences. "And oh, Fred, wouldn't it be nice if we could keep a cow, with a dear little calf to milk—"

"Do calves give milk?" asked Fred, solemnly.

But I was not to be diverted from my subject, and I coaxed and worried and badgered the dear fellow until he gave up the argument, and promised that he "would think about it," which, of course, meant that I was to have my way!

I lay awake half the night building castles in the air, and all the next day I was in such an ecstatic frame of mind I could not refrain

from discussing our prospects with Ailsie, our "girle."

She was no youthful chit, Ailsie, having parted company with her fortieth birthday almost a year ago. She was an old retainer, and had lived with my grandmother more years than she had fingers and toes, as she proudly asserted.

When our family fortunes dwindled away and I found myself penniless and obliged to earn my own living behind a bookkeeper's desk, Ailsie still stuck by me. And when Fred and I were married, though we were ill able to keep a girl, I had not the heart to cast her adrift.

Ailsie sympathized with me in my hopes and aspirations for a pastoral life, and with her assistance I made out a list of garden-seeds which would be absolutely necessary for a first planting.

Six-weeks' beans, Crookneck squash and Mountain Sweet sugar-corn we agreed upon without much discussion. But we wrangled considerably over the respective merits of Early Rose or Snowflake potatoes, and had a regular tiff as to whether Flat Dutch or Drumhead cabbage was suited to our needs.

Fortunately our discussion was brought to a premature end by the appearance of Fred, with his pockets bulged out with newspapers, which he had procured at my suggestion, with a view to advertisements of country property to be rented.

As soon as dinner was dispatched we fell to work on the papers, and did actually find one advertisement which seemed as though it was meant for us.

"Eureka!" I cried, exultantly. "Here is the very house we want! 'For rent—Three-room house, on Iron Mountain railroad, a mile from station; forty miles from St. Louis. Apply at Hilpenhaner's Hotel, Gum Springs station.'"

"Oh, Fred, it's just what we want! We'll take it, won't we?" I cried, enthusiastically.

"We must see it first, Mrs. Mortimer; perhaps it stands in a frog-pond or a cat-swamp," said Fred, aggravatingly.

"Nonsense! It's not at all likely," I declared. "You must get a holiday and a pass and go and secure it to-morrow."

"Can't be done," said Fred, with masculine sang froid. "The Iron Mountain and Southern mail and passenger train leaves Union Station at 7:15 A. M., and consequently I would have to start off without either a pass or a holiday if I went to-morrow."

"But isn't there a later train?" I asked.

"Not any which stops at Gum Springs," returned my liege lord, solemnly. "Except the local freight, and I have no desire to trust myself to the luxuries and accommodations of the caboose."

I was vexed with the delay, but there was no help for it, and, after all, it did not seem so very long until "the day after to-morrow," when I surreptitiously stowed a lunch of sandwiches and cheese into Fred's coat-pocket, and kissed him good-by as he hurried off to catch his train.

That was the longest day of my life, I do verily believe. I knew Fred could not possibly reach home again before six o'clock, yet when it was barely three I began to grow nervous and fidgety, and ran to the window to peer down at each and every street-car that passed.

But at last, oh, happy moment! I heard a well-known step on the stairway. I threw open the door and rushed headlong into the arms of my better half.

"Don't keep me in suspense!" I cried, excitedly; "tell me at once, is it yes or no?"

"Well," he returned, with that cool deliberation a man assumes when he knows the partner of his joys and sorrows is just dying with expectancy, "we can have the house, Mrs. Mortimer."

"Goody!" I cried, ecstatically. "And you rented it, of course. How much do you have to pay? And how soon can we move?"

"One question at a time, my dear," returned Fred, with provoking coolness. "I have not rented the place yet, but—" here he left me in harrowing suspense again, while he divested himself of his hat and overcoat, and hung them carefully in the wardrobe.

"But why did you not rent it?" I cried, eagerly. "Somebody else may get ahead of you, and—"

"But I have the refusal of it," he continued, coolly ignoring my interruption. "I was not certain whether you would like it."

"Pshaw! Of course I shall like it," I interposed.

"You see, it stands on a hill—"

"Nothing could please me better!"

"And it seems rather dilapidated. Been vacant for six months, the owner tells me; the plaster has fallen off in the kitchen, and some of the window-panes are missing. The front porch needs underpinning, too, but the owner has promised to put it in good repair if we rent it."

"But how much does he ask for it?" I demanded, anxiously.

"The rent," said Fred, looking as inscrutable as the sphynx. "Is—prepare yourself for something stupendous, little woman—exactly five dollars a month!"

I gave a gasp of relief.

"You don't mean it, though," I faltered.

"Five dollars a month," he reiterated. "You see, the fields and meadows are reuted out to another party 'on sheers,' the owner said."

"Oh!"

"The house, with a good, large yard or lawn, and a garden spot, besides part of the orchard, is all we should have."

"That will be amply sufficient," I assured him, "for, of course, you could not cultivate a farm."

"As for a cow," continued Fred, "we can have the use of one for taking care of her. The owner has more than he knows what to do with."

So we rented the place. I was more than pleased when I came to see it. The house was an old-fashioned structure, containing two good-sized rooms on the ground floor, with a hall between, and a spacious kitchen, which would also answer for a dining-room. Above was a half-story containing two very comfortable chambers. There was also a veranda running the whole length of the house, up-stairs and down-stairs.

But the view! It was charming! The house fronted to the east, and below us, at the foot of the hill, were wide green fields and meadows, level as a carpeted floor. Here and there at long distances stood tall, majestic trees with broad-spreading branches, making dark splotches of color on the waving crops.

Beyond, as far as the eye could reach, were the forest-trees—maple and ash and elm, oak, hickory and locust. Between the wheat-fields and the woodlands was the railway, curving gracefully around a bend, and I never tired of watching the trains go speeding by, leaving a trail of dark blue smoke floating back like a somber veil. Beyond the track, and through the dense, dark woods, we caught glimpses of a little stream sparkling brightly on its way to the great "Father of Waters."

Back of the house was a grassy yard, and in the rear of this the orchard, quite an extensive one, consisting mostly of apple-trees. Their gnarled and knotted limbs bore evidences of quite a respectable old age, but they bore a wonderful amount of fruit nevertheless.

Our landlord, Mr. Bordergrass, was as good as his word, and made the necessary repairs, and when we had got settled and our household goods satisfactorily arranged, I gave a sigh of relief, and began to think of taking "solid comfort" in my country home.

"Wych Hazel Farm," as we christened it, was scarcely a mile from the station, so it was only a good walk for Fred, and even Ailsie did not mind "footing it" to the village store twice or three times a week to order our necessary supplies. The road was winding and picturesque, shaded with forest-trees and bordered with clumps of witch-hazel and hackberry-bushes.

We bought some Plymouth Rocks of Mr. Bordergrass—fine, thrifty fowls—that cackled and sang all day, and gave us a plentiful supply of fresh eggs; and Ailsie milked the cow, a gentle, mild-eyed creature that stood chewing her cud beside the bars night and morning, and watching her calf with a maternal eye as it frisked and gambled in the barnyard.

"If we could only buy the place," I thought, "what a happy woman I should be!"

We had been a year at Wych Hazel Farm, and it seemed to me as if I never wanted to live anywhere else. Baby was six months old now, and as fat and round as a butter-hall. Fred, too, was already growing stouter and heartier, with the exercise and the pure air and wholesome country fare. Dear Fred, he was born and bred in the country, and a farm life would just suit him. I only we could buy the place, how delightful it would be!

To be sure, there was no society at Ginn Springs, but we were not so very far from St. Louis, and our few intimate friends could come down on special occasions, such as strawberry-time, and, really, I was so busy with my gardening and butter-making that I had no time to be lonely or feel the want of society. Life was one long dream of happiness to me for a time.

But alas! there came a rude awakening. The first cloud which came to mar the brightness of our idyllic life appeared when our landlord put up a notice of "This farm for sale," on a gigantic buttonball-tree which overshadowed the gate.

"I ain't able to tend the farm no longer," he said, "an' being my boys are all gals, I don't see no other eternity but sellin' out. Rentin' out the ground on sheers don't amount to shucks, an' three thousand dollars will buy the whole sheebang, growin' crops throwed in."

It was a very fair offer, for the wheat crop alone would be worth five hundred dollars, and the meadows as much more, Fred said. I could see the dear boy would have given his ears almost to have been able to make the purchase, but the moon would have been quite as attainable as three thousand dollars to us, and there was no use to make ourselves unhappy about it.

"Perhaps they will not find a purchaser very soon," consoled Fred, "so we will not borrow trouble yet awhile."

But the old saying that "misfortunes never come singly" turned out to be a true one in our case, for the next day after the notice was posted Ailsie found herself confined to her bed with rheumatism—an old ailment of hers—and the whole burden of the house-work fell upon me.

"I wouldn't mind it so much," groaned the faithful servitor, "if I hadn't put the close to soak las' night, an' they'll haf to be washed to-day, whether or no. An' me on the flat o' my back!"

"Never mind, Ailsie," I admonished; "it won't hurt me to do the washing for once—only the white clothes are in soak, you know, and to-morrow I can send by Mr. Mortimer for a colored woman to stay with me until you get well."

But although I tried to put the best face on the matter, it was a trying day for me, and I sat down, when it was over, with a sigh of relief.

Baby was sound asleep in his crib, and Fred's supper was ready to serve when he came. I had carried Ailsie some tea and toast, and had swallowed a few mouthfuls myself, for it would be a full hour before Fred came, and I had had a wearying day.

I felt lonesome and dismal in the fast-gathering dusk, and as soon as night fell I lighted the lamp, and sat down in my cane-seated rocker near the table to look over the last "Munsey," which Fred had brought me from the city.

I had turned over a few leaves when the gleam of something bright caught my eye from across the room. I took another glance, and the very blood froze in my veins as I discovered the figure of a man snugly ensconced under the lounge, which stood against the wall at the further side of the room.

The gleam of the light which had first attracted my attention was reflected from the barrel of a polished revolver by his side.

Fortunately I did not scream. All power of motion, and even of thought, seemed to forsake me, and I sat silent and speechless as a statue. I do not think I shall ever forget the horror of that moment to the last day of existence.

It seemed like hours to me, but was in reality not more than a minute or two, before the spell was broken, and my blood came surging through my veins with the velocity of a mountain torrent. The throbbing of my heart was painful for some seconds, but presently the excitement abated, my will-power returned to me, and my nerves resumed their wonted tension.

Like a flash the knowledge came to me that my own safety and that of my child depended on my calmness and courage. Flight was out of the question, I knew. I was not strong enough to carry the baby and elude the vigilance of the burglar, who would doubtless pursue me, whatever his intentions were, to prevent me from giving the alarm. And I would have suffered death rather than leave my child, even to seek help. And, besides, it would have been cowardly to leave Ailsie, helpless as she was, to the mercy of the villain.

There was nothing for it, then, but to cudgel my brains for some means of outwitting the foe, and this object could be obtained only by disarming him of all suspicion that he had been discovered.

It was a trying ordeal, but by using all my will-power I forced myself to remain seated, calmly turning the leaves of the magazine as if nothing had happened. I even succeeded in humming a few notes of an old-time melody, furtively watching the clock meanwhile, and making a mental calculation as to how soon I might expect to hear Fred's welcome footsteps outside the door. Alas! it was still over half an hour until he could possibly reach home, even if the train were on time; and it had frequently been belated for an hour or more. Only a few nights ago there had been a wreck on the bridge near Cadette, and it was near twelve o'clock before Fred reached home. What if such an accident should happen to-night? I thought, with a sudden faintness at my heart.

To add to my terror, I fancied that the burglar was getting restive. I was certain I could hear him change his position once or twice, and each time my heart seemed to jump into my throat. Still the minutes lagged along until fifteen had slowly passed away to that hour from which no moment ever returns, when my ears were startled by an unexpected sound, which electrified my whole being with renewed hope. It was not my husband's footstep, reader, but something almost as welcome; in fact, it was the sound of a long, loud and uncompromising snore proceeding from under the lounge. In fact, it was unimpeachable evidence that the burglar was sound asleep!

In my relief I could have shrieked aloud. Should I snatch up my baby and seek safety and assistance by flight? No; one cry from the child might awake the sleeping foe, and all would be lost. I took better counsel with myself, and slowly, cautiously approaching the burglar's sleeping-place, with a prayer, fervent but brief, on my lips, I disarmed the enemy, and fled back to my chair undetected, where I sat, weapon in hand, ready to fire

at the first aggressive movement of the enemy.

The time for Fred to reach home came and passed. Ten minutes, twenty, thirty, crept slowly away, and still I sat, the revolver in my hand pointed directly at the burglar, while one rigid finger touched the trigger.

While I sat thus, looking undoubtedly like an avenging fate, the sound of voices outside the door smote on my ear.

"What if it should be the burglar's 'pals'?" I thought, with swift alarm. But I was quickly reassured by Fred's familiar "ha! ha! ha!" I did not know until long afterwards that his companion was an old college "chum," whom he had invited to stay a few days with us, and whose assistance proved very opportune in the capture of my burglar.

How astonished Fred was when I fainted in his arms, after mechanically pointing to the concealed enemy, must be left to the imagination of my readers. When I first recovered my consciousness I was lying on the lounge, with Fred holding my hand and bathing my forehead with aromatic vinegar.

"Where is he?" I murmured, shudderingly, my thoughts still with the burglar.

"In safe hands," assured Fred, "thanks to my plucky little wife!"

But I learned later that my "captive," as Fred persisted in calling him, was a noted bank robber very much wanted by the police. He had over fifty thousand dollars' worth of "swag"—whatever that is—concealed about him, and had no doubt stolen into our house for purposes of concealment rather than burglary.

The officers of the bank who had recovered their funds through my "heroism," as they were pleased to call it, insisted on making me a present of five thousand dollars, which they declared was no more than I deserved, after the ordeal I had gone through.

I should never have accepted it for myself, but when I thought of Fred and baby, my scruples melted away.

Wych Hazel Farm is ours now. Fred is brown as a berry, and has already gained ten pounds in weight, and baby is as round as a butter-ball.

Ailsie, too, has recovered her health, and is quite famous for her gilt-edge butter, for we have quite a little herd of Jerseys now. So that altogether our cup of happiness is full to overflowing.

NEW SLANG FROM CHICAGO.

"What gear do you ride?" is the latest slang expression. It was coined by Captain Anson, of the Chicago base-ball club, and promises to meet with great favor. The other day, just before the game was called, a man who confessed that he was a base-ball crank, stepped up to Captain Anson and told him to win the championship.

"What you ought to do," he said, "is to put Callahan in center field and let Lange hold down third base. Everitt is a good pitcher, and he ought to be given a show in the box. Then, if I were you, I'd change Ryan to short-stop and put McCormick behind the bat. Now, take my advice, and I'll bet you a new hat you'll win the pennant."

When the man got through talking Captain Anson scrutinized him closely, and finally ejaculated in a tone of disgust:

"Say, what gear do you ride?"

The expression found favor with those who heard it, and before the end of the game it had become popular.—Chicago Times-Herald.

RIGHT-HAND MAN OF THREE PRESIDENTS.

It has fallen to Thomas B. Reed to render vital assistance to three presidents in the execution of their policies. In the whole history of the government there is no other service which parallels this. As speaker of the fifty-first Congress, with its close majority, Mr. Reed prevented a free-coinage bill from reaching President Harrison, much to the latter's satisfaction, after the Senate had committed itself. As the leader of the Republicans of the House Mr. Reed enabled President Cleveland to carry out his earnest desire to repeal the Sherman silver-purchasing act. And more recently the power of this individuality has enabled President McKinley to delay the belligerency resolution until he can formulate fully his Cuban policy. Three administrations Mr. Reed has put under deep obligations to him, while at the same time carrying out his own views of what the public weal demanded.—St. Louis Globe-Democrat.

DO CONGRESSMEN GET LIVING WAGES?

Can a senator or member of Congress live in Washington on his salary?

The answer to the question depends upon the man to whom it is addressed. Senator Elkins, of West Virginia, who lives in a palace on K street, where the furnishings of the bath-room alone would cost almost a year's salary, would say that the \$5,000 which the government pays a senator is but a drop in the bucket. So would Senator McMillan, whose income from his great lumber, manufacturing and railroad interests is

to his salary as the top of Pike's Peak is to the Nebraska prairie. There are other senators, like Hale and Wetmore, whose establishments could not be run on their salaries for three months in the year. In fact, there are very few senators to whom the salary is really an important and a vital factor of their position.

It costs more for a senator to live in Washington than for a representative. His social position is more pronounced, and if he is married and is housekeeping the demands of society upon him are very great. Sometimes a senator will go to a hotel to save money. Hotel life is also chosen for other reasons. Senator Hanna went to a hotel because he hoped that Congress would be through by April or May, and because a house would be unnecessary if something should drop in Ohio next fall. Senator Platt of New York lives at a hotel because his wife is not well enough to undertake the duties of housekeeping, and Senator Platt of Connecticut likes a hotel because—but as he has lived in a hotel all his life one would have to go too far back for any genuine information on the question. Opinions differ as to whether it is cheaper to live in a hotel than to keep house. It all depends upon the hotel.

Some of the senators live within their salaries, and save money. They shun society, and ride in cars instead of carriages, and neither give nor attend dinners. These, however, are the exceptions. A senator cannot, as a general rule, live on the salary which the government pays him.—Washington Post.

LANDS FOR SALE.

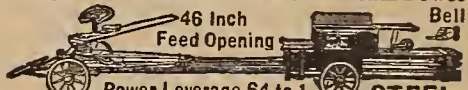
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A reward of \$400 in first prizes is offered for naming the missing word. If you win a first prize you may have your choice of the \$100 bicycles manufactured by the National Sewing Machine Co., Belvidere, Ill. Write them for their catalogue. See page 19 for full particulars.

Our Household.

Only a night from old to new!

Night and the healing balm of sleep!

Each morn is New-Year's morn come true,

Morn of a festival to keep.

All nights are sacred nights to make

'Confession and resolve and prayer;

All days are sacred days to wake

New gladness in the sunny air.

Only a night from old to new!

Only a sleep from night to morn!

The new is but the old come true;

Each sunrise sees a new year born.

—Helen Hunt.

HOME TOPICS.

CURRENT PIE.—A most delicious currant pie is made by taking one cupful of ripe currants, one cupful of sugar and one egg; beat the egg and sugar together, stir in the currants, and bake it between two crusts. Moisten the edge of the under crust before you put the upper crust on, and press the edges tightly together, and the juice will not boil over.

Cherry pie is nice made in the same way.

POTATOES FOR BREAKFAST.—Slice some cold boiled potatoes about one fourth of an inch thick; put them into a saucepan, with two tablespoonfuls of butter, and stir them until they are all buttered, but not browned, then add four tablespoonfuls of milk, salt, pepper and a tablespoonful of chopped parsley. Let the milk boil up once, then take it from the fire, add the juice of half a lemon, stir up well, and serve at once while very hot.

ORDERLY CHILDREN.—It will save mother a great deal of work if she will teach her children to be orderly; but they will never learn this if she always puts away their toys or books which they have laying about, and when these things are wanted again they know they have only to ask mother where they are. It is better to let them suffer the inconvenience of losing their things if they will learn to take care of them in no other way. I know it is often easier at the time to pick up and put away things one's self than to call a child to do it; but we must consider the importance of orderly habits being formed, and besides, it will save ourselves many steps in the future.

"A man can never find anything," is a charge often made. This is because when a boy mother always hunted up any missing article for him, consequently now he expects his wife to do the same.

I do not mean that children must never make a litter and have their toys and playthings scattered about, but only that after they are through with their play they should clean up the litter.

Do not fret if on a rainy day the little boy covers the kitchen floor with whittlings while he is making a wonderful boat, nor if a litter of dolls' dressmaking is found on the sitting-room floor just as company is coming in, but insist that when they have finished all the litter must be picked up, the floor swept and everything put in order. Habits of neatness and order will

INFLUENCE OF COLOR.

Until our attention is directly called to the subject we all feel the influence of color, although we may not think about it. We do not always know why we have joyous emotions, but if we stop to trace their connection to the origin, nearly always we find that they are due to some simple physical cause. A great poet calls man "a creature subject to the skyey influences." This is so universally, though perhaps unconsciously, acknowledged that there has been adopted that popular expression of being "under the weather." In accordance with human ingratitude and aptness to grumble this is always applied to ill health and dull spirits when the weather has been disagreeable. When the sun shows his face and we cheer up we seldom attribute our improved state of mind to its true cause, but generally flatter ourselves that we have voluntarily gained a brighter mood by doing our duties exactly or exercising our minds

Fabrics of pleasing colors cost no more than those of depressing hues. For the walls of our rooms what is better than these combinations which nature shows in her brightest mood? Take a delicate sky blue with harmonious tracings of

tints of red, such as pink, terra-cotta and rose, are less fatiguing, and may be used more agreeably than scarlet or cardinal. A red cushion or curtain in a room may be very exhilarating, especially in winter; and truly the reason why we all enjoy



an open fire on a cold day is as much on account of its bright red and yellow lines as because of its heat. A dull black stove or an inane register will give us warmth, but they lack fire color, and therefore we ungratefully use them without affection or admiration.

If we use artistic judgment, we can manage color in our homes so that December is as pleasant as May, and summer may last all the year. Bright skies and green foliage may be caught and perpetuated in a water-color picture, and every sunbeam nature grants us may be converted into rainbows if we hang prisms in our windows.

The influence of color in dress has influence on the wearer as well as on beholders. In describing his two daughters, one of gay and the other of serious disposition, the Vicar of Wakefield said, "But I have seen them change characters for a whole day. A suit of mourning has transformed my coquette into a prude, and a new set of ribbons has given her sister more than natural vivacity." Certainly when a woman sees her reflection in the mirror a combination of cheerful tints will put her in a good humor, and a dull-robed, colorless image will make her feel old and sad. There are seasons for mourning, but they do not last always. Consider how many times the authors of the Bible tell us to "rejoice," and "again I say unto you rejoice."

Let us take advantage of that always available influence of pleasing colors—the colors which nature bestows in the skies, the trees, the fields and the flowers.

KATE KAUFFMAN.

SLEEVES, SKIRTS AND WAISTS.

Sometimes it is necessary as late as July to make up some thin dresses. Indeed, I prefer to leave something to make in the height of the season. The waists are in blouse and bolero effects. Boleros are made of lace, knife-plaited mousseline-de-soie or organdie. The blouse effect in the new Liberty silk is very soft and pretty in its effect, and more lasting than chiffon or silk muslin. Sleeves are all tight above the elbow. It is nice to line the sleeves of thin dresses with a thin silk, as the sleeve sets better. Velvet ribbon is much worn in all colors. Skirts are elaborately trimmed in braid, knife-plaitings and lace. CHRISTIE IRVING.

LATEST FAD IN PINCUSHIONS.

We have had pincushions by the dozens—square ones, round ones, heart-shaped ones, etc., etc. All these are relegated to the past, and now we are pleased



to note the dainty "bolster pincushion," which is entirely devoid of "fuss and feathers." Its simplicity is its beauty, and its beauty can adorn the handsomest dresser. The cushions required are eleven inches long and six and one half inches around. If this size cannot be secured, make one yourself out of bleached cotton, and with

red the "trumpet color," and truly it is pleasant to have, now and then, a high, piercing note in the chorus of color; but it would not be agreeable to have an orchestra composed altogether of trumpets. We call a thing "loud" when too bright to harmonize with nature's methods. While we aim to be cheerful we should try to avoid being boisterous. Diluted

successfully. Sometimes there breaks out in song or poem a true perception of this relation between the sky and our mental firmament, as in "Wait till the clouds roll by." Scientists tell us that the reason we feel better on a clear, bright day is because the atmosphere has qualities which it lacks at gloomy times. We do not deny that, but our study is color, and you will agree that you feel better when you look at a soft blue sky than when you see one of leaden gray. Stop to think a moment, and you will find that the varying degrees of joy derived from the year's seasons depend on their color. Spring comes with a mingling of tender tints in blue, green and pink; summer glows with intense colors; autumn brings "the sear and yellow leaf;" and winter chills us with white and gray.

Over all these changes we have no control, but there are places where we can apply the lessons taught by nature; namely, in our homes and in our garments,



be learned in due time if we gently and patiently instil the principles.

MAIDA McL.

EVERY trace of tar may be removed from cloth by saturating the spot with turpentine and rubbing it well.

the aid of a stick stuff the case with fine sawdust, remembering that close packing is a requisite to a shapely cushion.

The pincushion here illustrated is made of white satin. The design embroidered on the cushion is easily traced with your pencil.

The three fern shades in green filo are used for the leaves, the darkest shade being preferable for the vine or outlining of the circles. Forget-me-not blue is used for the forget-me-nots. One inch from either end encircle the cushion with a band of ribbon, two yards of ribbon being required for the bands and rosettes on each corner. It is very effective to embroider the forget-me-nots in yellow, violet or pink, and use ribbon the same shade of filo selected. The satin is turned in and blind-stitched under the bottom of these cushions, thus avoiding the ugly side seams. The satin covers are dainty and pretty, but for service as well as beauty a fine quality of linen is more to be desired, as these can be easily removed for the laundry.

PATTIE HANGER.

SANDWICHES.

Appetizing sandwiches are often a help to a comfortable tea party on the porch or lawn during the hot evenings when eating in the house seems so stuffy. If they are to be kept a few hours before using, they can be kept moist by being wrapped in a napkin wrung out of hot water and put in a cool place.

Butter the bread upon the loaf, and cream the butter before spreading it, then use a sharp knife and cut the slices thin. One-day-old bread is better than fresh bread. I was amused at a gentle-

boiled eggs and a few drops of vinegar to a paste, season with salt and pepper and chopped nasturtium-stems; spread upon lightly buttered slices of bread, and lay one of the flowers on before putting them together. Use lettuce-leaves the same way.

BEAN SANDWICHES.—Rub a cupful of baked beans to a paste, add one teaspoonful each of chopped parsley, celery, onion-juice and a little mixed mustard; spread between thin slices of brown bread.

If you bake your own brown bread, bake it in round fruit-cans, so as to make the slices round.

A new pan comes on purpose for sandwich bread, even defining the slices, and is very convenient to have. It is always easier and usually less expense to work with the proper tools.

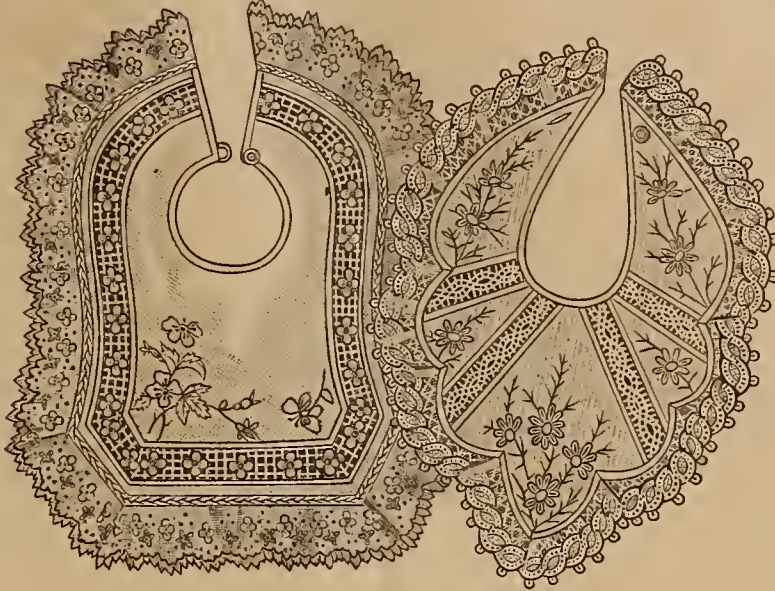
Take your gasoline-stove out in the yard on a stuffy evening, and have supper under the trees—coffee, sandwiches, fruit and cake. Live simply through the heat of summer, and enjoy all the beautiful summer-time that you can.

BELLE KING.

NOVELTIES.

I take this way of answering a number of correspondents who have asked for these special things, feeling they will help some one else.

WIDOW'S CAP.—Few ladies wear caps



Featherbone should be used around the edge of the undershirt. The one we illustrate is lace-trimmed. This is optional. A rolled hem is quite as effective. Use your dress-skirt pattern, and make the under part only two and one half yards around. This can be of appaca, with silk ruffles.

SHIRT-WAISTS.—All materials are employed for these, and it is well to have one of silk or wool for cool days to be worn either with a white collar or one of the material. A white kid belt is dressy with the white collar. Make the cuffs of the material, as a small turn-over cuff can be worn also. A white one, of linen lawn, with soft cuffs, and hemstitched ruffles down the box-plait and around the cuffs, is a pretty change.

CROSS-STITCH.—The Greek key pattern is always a favorite. Used upon aprons or children's clothing in wash-silk it will outwear any other trimming.

CHRISTIE IRVING.

MEN'S FANCY SOCK.

The sock has the so-called Italian foot and manufacturer's heel. Four needles, No. 18. The knitting to be thirteen stitches to the inch. Four ounces of navy-blue or black wool and a ball of pale, straw-colored knitting-silk.

Cast on 100 stitches with wool; knit $4\frac{1}{4}$ inches, or 84 rounds, in a rib of knit 2, purl 2.

Eighty-fifth round—Plain.

Eighty-sixth round—Join the silk; it is used with the wool; knit 3 wool and 1 silk stitch alternately.

As you knit with wool, keep the silk over the fingers of the left hand, put the right-hand needle under the silk (as held) in knitting one stitch, then above the silk in knitting the next stitch, by which means the silk is knitted in, and there are no long loops at the back, which is very bad both for wear and appearance.

Eighty-seventh round—Plain, with wool.

Eighty-eighth row—Knit 2 with wool; then 1 stitch silk, 3 stitches wool alternately. Repeat from eighty-fifth round twenty-one times.

DIVIDE FOR THE HEEL.—Take 56 stitches for the heel, knit with wool only. Knit 30 rows, a plain row and purl row alternately.

Thirty-first row—Knit 25, knit 2 together, knit 3, knit 2 together, knit the remainder.

Thirty-second row—Purl.

Repeat these two rows five more times, of course knitting one plain stitch less each row before and after the decreasing. Then divide the stitches equally, finish by grafting the one half of the stitches to the other, and the three center stitches as one, or cast off and sew the two sides together.

THE FOOT.—For the Italian foot the front is worked first, and is then sewn to the upper part; there is no difficulty in doing this with silk. Each plain row of the

leg will be purled when the upper part of the foot is knitted separately; therefore, in the purl row the silk is brought to the front of the needles, and is worked in by putting it over and under the wool every third stitch. Take the 44 stitches left for the foot, and 2 more on each side; these 2 stitches are to be worked with wool throughout. Knit until you have 54 rows of silk, then a purl row, and leave these stitches or put them on a thread.

THE UNDER PART.—With wool. Take up on the sides of the heel 76 stitches. Purl a row.

Second row—Knit.

Third row—Purl.

Fourth row—Knit the third and fourth together, and the third and fourth from the end of the row.

Repeat from the second row until you have worked 14 rows of decreasing; then in plain and purl rows alternately to the end of the one hundred and eighth row.

THE TOE.—Arrange the stitches on the three needles again, and knit a plain round.

Second round—* Knit 2 together, knit 7, repeat from *, then 7 rounds plain.

Tenth round—* Knit 2 together, knit 6, repeat from *; 6 rounds plain.

Seventeenth round—* Knit 2 together, knit 5, repeat from *; 5 rounds plain.

Twenty-third round—* Knit 2 together, knit 4, repeat from *; 4 rounds plain.

Twenty-eighth round—* Knit 2 together, knit 3, repeat from *; 3 rounds plain.

Thirty-second round—* Knit 2 together, knit 2, repeat from *; 2 rounds plain.

Thirty-fifth round—* Knit 2 together, knit 1, repeat from *.

Thirty-sixth round—Knit 2 together all around.

Break off the wool about nine inches from the knitting, run it through the stitches twice, draw them up, and fasten securely.

M. ELLIOTT.

A FEW CHOICE RECIPES.

WHITE CAKE.—

5 eggs, whites of,
1 cupful of butter,
 $\frac{3}{4}$ cupful of milk,
 $3\frac{1}{2}$ cupfuls of flour,
2 cupfuls of sugar,
3 teaspoonfuls of baking-powder,
Flavoring.

Bake in layers with icing between.

B. I.

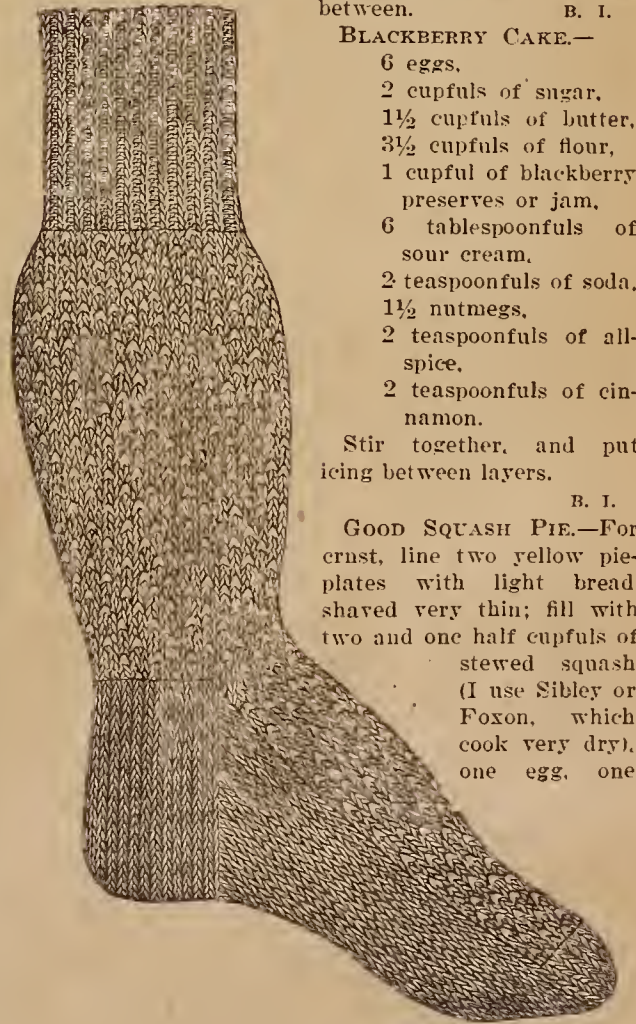
BLACKBERRY CAKE.—

6 eggs,
2 cupfuls of sugar,
 $1\frac{1}{2}$ cupfuls of butter,
 $3\frac{1}{2}$ cupfuls of flour,
1 cupful of blackberry preserves or jam,
6 tablespoonfuls of sour cream,
2 teaspoonfuls of soda,
 $1\frac{1}{2}$ nutmegs,
2 teaspoonfuls of all-spice,
2 teaspoonfuls of cinnamon.

Stir together, and put icing between layers.

B. I.

GOOD SQUASH PIE.—For crust, line two yellow pie-plates with light bread shaved very thin; fill with two and one half cupfuls of stewed squash (I use Sibley or Foxon, which cook very dry), one egg, one



cupful of milk; sweeten to taste, and spice with ginger, cloves and nutmeg. Bake, well, and I think you will say it is good and wholesome.

LILLIE G.

Do not forget that you can obtain a bicycle for a word. See page 19 for full particulars.



man remarking of a very dainty lunch that it was so delicious, and he enjoyed it because it seemed to have been gotten up with apparently no trouble! It took the young lady four hours to prepare what was used, and she put it away so as to be ready to give all her time to the caller when he came.

It is only the echo of many other men who think everything pertaining to getting up a good meal is so very easy. I know it is awfully easy to eat it up.

When using bread for sandwiches, remove all the crusts. They can be used afterward for breaded veal or for puddings.

OLIVE SANDWICHES.—Spread large square crackers with cream cheese, cover



with finely chopped olives mixed with mayonnaise dressing. It can be bought bottled, and saves much trouble of preparing. Lay another cracker on top of it.

NUT SANDWICHES.—Equal parts of grated cheese and chopped English walnuts mixed and seasoned with salt and a dash of coralline pepper; spread upon thin slices of bread, and cut into shapes with a fancy cake-cutter.

NASTURTIUM SANDWICHES.—Rub hard-

these days, and what is now frequently called a widow's cap means only the white ruche worn in a mourning-bonnet. These need renewing so often it is well to know how to make them. Use fine tarlatan. Double a two-inch piece the entire width; at the doubled edge run a tuck one half inch deep; then with the fingers push it up closely on a round lead-pencil, making it as crimped as possible; then gather the raw edge, and baste upon it the thin white ribbon known as seam-binding.

If a cap for house wear is wanted, make a three-cornered piece for the top of the head, and trim it with one of these ruches and milliner folds of the tarlatan, and wide-hemmed strings to hang at the sides.

KNITTED BALL.—Use brown, blue, scarlet, black and white for colors. Fine steel needles. Cast on one needle thirty stitches of the brown, knit garter, knitting back and forth for ten rows, then two rows of white, two rows of scarlet, two of black and two of white; fasten on the blue, and knit thirty rows, and use the other colors as directed between the solid colors. Make eight sections, then bind off; sew up at the side, and draw up closely at one end. Stuff with wool or cotton, and draw up the other end. Finish with ribbon bows of narrow ribbon or a close-cut pom-pom of the wool.

BABY'S BIBS.—Make these of white pique trimmed with lace. Use a dress-shield in the neck of the baby's dress to

Our Household.

"TOO OLD TO KISS!"

"Too old to kiss!" "Too old to kiss!"
Alas! and has it come to this?
Have feelings thus so sadly changed
That youth and age must be estranged?

'Tis true my faded eye is dim,
And howed my form with trembling limb;
My heart beats slow, but still, in truth,
It quickens at the sight of youth.

"Too old to kiss!" I would forego
The bitter pangs those words bestow;
For memory sends those scalding tears,
As it returns to former years.

Three lovely little ones had we;
I prayed they might be spared to me,
As only mothers ever pray:
My prayers were vain—they passed away!

And now all earthly joy is gone!
Poor, old and friendless, and forlorn.
My soul by bitterest grief oppress—
But soon I, too, shall be at rest.

Your little face, so full of glee,
Brought back those faces lost to me;
And this is why, my little miss,
I just now asked you for a kiss.

—Leon West.

SOMETHING NEW.

THE wise man said, "There is nothing new under the sun," but if the following way of quilting quilts is not something new, I don't know what is:

In the first place, quilting quilts in the old way with the cumbersome frames that took up so much room, and the carefully set stitching that took so much time, were both a vexation of spirit unless one invited her neighbors far and wide and put the work into their hands to be "dealt" with, and perhaps have to suffer agonies every time one viewed the results; for all good neighbors are not good quilters, the rule being to see how much can be accomplished instead of how well it can be done. Whether the inventor of quilting each block separately before joining has a patent on her way I do not know; but, at any rate, I think she deserves one. In the first place, press the pieced blocks out smoothly on the wrong side with a hot iron; then cut linings carefully, and have the cotton unrolled and spread out to the desired thickness. Cut the cotton the size of the blocks, except allowing for seams. When set together, place the cotton on the lining, cover with the pieced block, and baste together. Have your machine so that both tensions are alike and a nice stitch, not too short; then mark out any design you like, and stitch them—a block at a time—as you have the opportunity. With some one to cut out and baste together, unless the quilting is very close, one can quilt a quilt in a day. I should think, without any trouble. When all are done, the blocks can be joined together by sewing the upper side on the machine and the under side hemmed down neatly by hand in strips; then join the strips in the same fashion. The plain blocks can be stitched in any design desired, as it is very easy to turn them around under the machine-foot, owing to the smallness of their size when compared to quilting a whole quilt at once, which can never be done satisfactorily. The lining of the quilt, when the seams are worked with cross-stitch in Turkey-red cotton, with the quilting showing nicely, is often quite as pretty as the right.

When quilts are too much worn to be longer presentable, they will form the basis of a good comfort. They seem too good to throw away, and when sweet and clean are certainly as good as new for "filling." The tops pieced up from scraps of calico is nice work for children, and scraps accumulate very rapidly where there are several girls to wear out calico dresses, aprons, etc. When ready to put together, they are nice knotted with red or blue yarn, whichever suits the color of the comfort best, as they are not worth the work of quilting over. A good addition to a mattress is a thick pad made of muslin or light ticking, with a filling

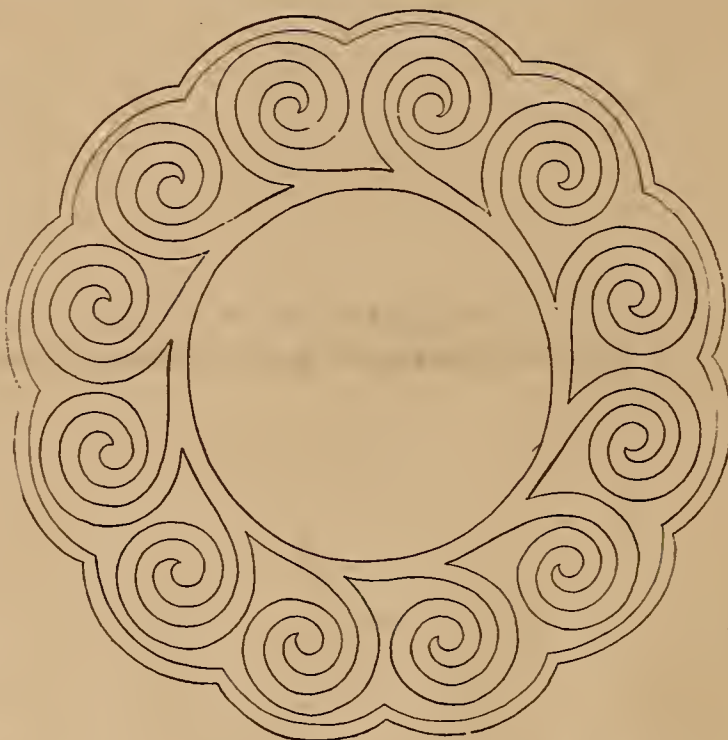
of cotton or wool; and knotted wool is preferable, but can be obtained only from factories. Where one lives near one of these, and the wool can be obtained, it is much better than cotton, as the pad can be taken apart and the wool washed much more easily than cotton. A. M. M.

FRUIT DESSERTS—BLACKBERRIES.

1. Blackberries (plain).
2. Phosphated Blackberry Jelly.
3. Blackberries, with Cream.
4. Blackberry Pie.
5. Blackberry Dumplings.
6. Blackberry Pudding.
7. Blackberry Shortcake.

To be really good, blackberries must be perfectly ripe and fresh, and not soft from having been picked too long. They should be carefully stemmed and picked over, and washed lightly through one or two waters, as the case may require, clear, cold water being best. After washing, they should be allowed to drain for awhile through a colander or sieve.

BLACKBERRIES (plain).—After having prepared the berries for use, place the same in the dessert-dish in which you intend to serve them—first a layer of berries, then a sprinkling of sugar (powdered), and so on, sprinkling the last layer very generously. Place away in a refrigerator or other cool place, so that they will be quite cold when served. To elaborate on this plain way of serving, prepare some whipped cream, sweeten same with powdered or confectionery sugar, and flavor with vanilla extract. After the cream, etc., are whipped up to a stiff snow, place same in a small dessert-bowl, and pass to each individual at the table, so that they can use the cream or not as desired. Ice-cream served with blackberries, and,



in fact, with berries of any sort, is also very delicious.

PHOSPHATED BLACKBERRY JELLY can be made a very pretty dessert if served properly. Prepare a quart of berries by stemming, carefully picking them over and washing them; put them into a saucepan, cover the berries with water, and boil them, after which they should be mashed, and rubbed through a sieve to free the juice and pulp from the seeds; add enough hot water to make up a quart, sweeten to taste, and boil up once. Soak one package of gelatin in one pint of cold water one half hour, and add it to the quart of hot fruit and juice, and stir until the gelatin is dissolved. Sweeten again to taste, and set in a refrigerator or other cool place to harden. Make the day previous to serving. After it has hardened, and just before serving, cut the jelly across and across, breaking it up into crystals and lightly piling it in individual glass dessert-dishes. It can be eaten plain or with whipped cream, and can be made from canned berries.

BLACKBERRIES, WITH CREAM.—Prepare for use one and one half pints of perfectly ripe berries; place them in a saucepan, adding one half pound of sugar and one half teaspoonful of molasses; cook until done, and then add one half teaspoonful of flour; then cook five minutes longer, and turn into a fancy mold (wet first with water). This dessert should be served with cream.

BLACKBERRY PIE.—Prepare your pie-crust, and roll it out thin; line your pie-plates as usual, place the ripe berries in same, and sprinkle over them some sugar

and also a little flour; then grate over them some nutmeg; place the upper crust over all, not forgetting to cut little slashes in it, as well as the little fork-prickings, which aid in baking the pie. This way is preferred by many to cooking the berries first before cooking in the crust.

BLACKBERRY DUMPLINGS.—Mix a crust or paste as follows: Sift three cupfuls of flour and one half teaspoonful of baking-powder and a pinch of salt into your mixing-bowl, to which add one half pound of very finely chopped beef suet, and one cupful of water; mix into a smooth, rather firm dough. These dumplings are cooked in cups, which should first be greased well and then lined with a thinly rolled out crust. Fill the cups with berries, sprinkle generously with sugar, and cover with more paste. Fill a shallow pan with boiling water which must reach half way up the cups, which must be placed in the water and steamed for forty-five minutes. Turn out on a dish, sift sugar (powdered) over them, and serve hot with spice sauce made as follows: Place in a saucepan three fourths of a pint of water, one cupful of sugar, and boil same twenty minutes; after which remove from the fire, and add one teaspoonful of extract of cloves and one of ginger. Dumplings of all sorts are a general favorite, and this dessert will not be the exception, I fancy.

BLACKBERRY PUDDING.—Berry puddings, unlike the usual run of puddings, are simple enough to permit of their being enjoyed by the children as well as the grown folks of the family, and the following served with sauce is quite delicious: Mix one pint of milk, three eggs, a little salt, a heaping quart of carefully prepared and cleaned berries, and flour enough to make a stiff batter. It is better, of course, to prepare your batter first, adding the berries afterward, first sifting them with flour in order that they may separate easily in the batter. Steam for two and one half hours, and serve hot with sauce as mentioned above.

BLACKBERRY SHORTCAKE.—For the crust take one quart of flour, one teaspoonful of salt, two heaping teaspoonfuls of baking-powder, two tablespoonfuls of butter and one pint of milk. Rub the butter well into the flour before adding the milk; and, by the way, it is hardly necessary to add that the baking-powder and salt should be well sifted into the flour first of all. Mix into a soft dough. This will be enough for two cakes, and consequently should be halved and rolled out thickly. Lay same on well-greased baking-tins, and bake in a hot oven for twenty minutes. Split the cakes carefully and quickly with a sharp knife, and place the lower portion on your dessert-dish; butter well, and add a layer of berries, sprinkle with sugar and with a little cream added; place the top layer on and add berries and sugar. The cream may be omitted from between the layers and served afterward, either whipped or plain.

These recipes are perhaps not valuable on account of their "newness," but because they have been collected from reliable sources and the series of fruit desserts arranged conveniently for the benefit of the housewives, to many of whom most, if not all, of the desserts will be new.

EMMA LOUISE HAUCK.

My wife had an attack of Asthma. I procured a bottle of Jayne's Expectorant and administered it to her until she was entirely cured.—E. A. PIETROPOINT, Springville, Iowa, May 27, 1892.

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Our Sunday Afternoon.

OUR ERRAND.

To seek his lost ones that from him are straying
Through all the earth,
With tender messages of sweet entreaty
Christ sends us forth.

From day to day, with courage unabating,
He bids us seek,
Bearing his words to his forgetful children,
Sinful and weak.

"Tell them I love them. Tell them I am waiting,
While yet they roam;
Tell them I look with yearning and with longing
Till they come home."

And so he waits while forth we bear his message
From day to day;
How can we linger idly by the wayside—
How dare delay?
And they, to hear the word his mercy sends them.

Our coming wait;
Oh, let us speed while yet the daylight lingers,
The hour is late!

—World's Crisis.

GOD IN THE BOOK.

THE reply of a young girl to the skeptic who sought to destroy her faith was an unanswerable one. This is the story as given by a writer in the "Sunday-school Lesson Illustrator."

She was only a fruit-seller—this girl of fourteen—and as she sat behind her neatly arranged stand she improved the time when trade was slack in reading her Bible. So absorbed did she become that she did not hear the footsteps of a man who was passing by, and was startled by his question:

"What are you reading that interests you so much?"

"The Word of God, sir," she replied.

"Who told you that the Bible is the Word of God?"

"God told me himself."

"God told you? Impossible! How did he tell you? You have never seen him or talked with him."

For a moment the girl sat confused and silent. The man, who was a skeptic, and took delight in destroying the faith of people in the Scriptures, thought he had won an easy victory. But he was mistaken. Suddenly she looked up with a flash in her dark eyes, and asked:

"Sir, who told you there is a sun yonder in the blue sky above us?"

"Who told me?" replied the man, smiling somewhat contemptuously, for he thought the girl was trying to hide her ignorance. "Who told me? The sun tells me this about itself. It warms me, and I love its light. That is telling me plain enough."

"Sir," said the girl, "you have put it right for both Bible and sun. That is the way God tells me this is his book. I read it, and it warms my heart and gives me light. I love its light, and no one but God can give such light and warmth through the pages of a book. It must be his. I don't want more telling; that's telling enough, sir. As sure as the sun is in the heaven, so sure is God shining through this book."

The skeptic was silenced. The girl's heart experience of the power of God's Word was an evidence he could not shake. —Union Gospel News.

THE SINS OF THE TONGUE.

The sins of the tongue all point to the necessity and profit of self-mastery. So evident and so important did this appear to James that it occurs again and again in his epistle. "In many things we all stumble," he writes, "If any stumble not in word, the same is a perfect man, able to bridle the whole body also." If this confession of failure and magnifying of the office of the tongue be then exaggerated, let any one sit down quietly and think of the sins and cruelties of human speech. The careless words which no repentance can call back again, the rash promises which it has cost us so much to fulfill, the expression of the lower nature which has shamed the higher, the confessions of evil and yieldings to falsehood, the hot, angry words which sober thought condemned—these are some of the perils of the tongue.—Congregationalist.

DALLYING WITH WRONG-DOING.

Test your sincerity by the manner in which you control or resist your evil thoughts. Do you suffer your thoughts to tamper with evil, to dally with wrongdoing? If so, you are not sincere. The tyrant Nero tried to degrade some of the great Roman nobles to as low a level as his own by making them appear as actors in the arena on the stage. To disobey was death. Florus was bidden thus to appear, and doubting whether to obey, consulted the virtuous and resolute Agrippinus.

"Go, by all means," answered Agrippinus.

"Well, but," replied Florus, with astonishment, "you yourself refused to obey."

"Yes," answered Agrippinus, "because I did not deliberate about it."

The categorical imperative, the naked, absolute prohibition of duty, must be implicitly, unquestioningly, instantly obeyed. To deliberate about it is to be a secret traitor; and the line which separates the secret traitor from the open rebel is thin as the spider's web.—Canon Farrar.

A BLESSED SECRET.

It is a blessed secret, this of living by the day. Any one can carry his burden, however heavy, until nightfall. Any one can do his work, however hard, for one day. Any one can live sweetly, patiently, lovingly and purely until the sun goes down. And this is all that life ever really means to us—just one little day. "Do to-day's duty; fight to-day's temptations, and do not weaken and distract yourself by looking forward to things you cannot see, and could not understand if you saw them." God gives us nights to shut down the curtain of darkness on our little days. We cannot see beyond. Short horizons make life easier, and give us one of the blessed secrets of brave, true, holy living. —Christian Work.

BOTTLED TEARS.

Tears are often mentioned in the Bible as evidences of sorrow and penitence, and the custom of bottling tears is alluded to in the fifty-sixth Psalm and eighth verse. The Persians are the only people in the world who still adhere to the old custom of bottling tears. In that country it constitutes an important part in the funeral ceremonies performed over the dead. Each of the mourners is presented with a sponge with which to mop the face and eyes, and after the burial these are taken by a priest, who squeezes the tears into bottles. Mourners' tears are believed to be the most efficacious remedy that can be supplied in several forms of Persian diseases.

AN EASY PLACE.

I received a letter from a lad asking me to find him an easy berth. To this I replied: "You cannot be an editor; do not try the law; do not think of the ministry; let alone all ships, shops and merchandise; abhor politics; don't practise medicine; be not a farmer or a mechanic; neither be a soldier or a sailor; don't work; don't study; don't think. None of these are easy. Oh, my son! You have come into a hard world. I know of only one easy place in it, and that is in the grave." —Henry Ward Beecher.

Here is a rare piece of irony and caustic sarcasm by Bishop E. R. Hendrix (M. E., South), aimed direct at those scientists who find a religion in India and China and Africa that compares favorably with the religion of the Son of God:

"How unfortunate the lands cursed by Christianity, and what would be their fate were it not for those independent souls who are not to be restrained by priestcraft, but who resolutely introduce the best literature of pagan lands and cry, 'These be your gods, O Israel! Away with Bacon and Locke and Milton and Shakspeare and Tennyson and Herschel and Faraday and Morse! Better fifty years of India than a cycle of Christian Europe! Genghis Khan and Timbuctoo forever! Release unto us Barabas; as for this Jesus, take him and crucify him! We will not have this man to reign over us! Empty your dungeons and give us any cutthroat Sepoy first! We will not have the bread of life; give us some of the fruit of the upas-tree, whose sap the natives of Africa use to poison their arrows! Take your egg; give us a scorpion! Away with your meat; give us a serpent.'"

How To Be Beautiful

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- III.—Grace and Expression.
- IV.—Bloom and Fairness.
- V.—Hair, the Crowning Glory.
- VI.—Training for a Fine Figure.
- VII.—Women Bred for Beauty.
- VIII.—The Culture of Beauty.
- IX.—Toilet Elegancies.
- X.—Manicuring.
- XI.—Cosmetics and Lotions.
- XII.—Things Inquired For.
- XIII.—Defects and Annoyances.
- XIV.—Different Constitutions.
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Our Miscellany.

WHILE people in eastern sections are still forming societies having their basis in the records of ancestors, people of Oregon have set out to form a state association of Native Sons of Oregon, to take part in the pioneer reunions there.

"WHAT would you say to a good, steady job of work?" asked the kind woman.

"What would I say to a job of work?" repeated Perry Patetic; "missus, it would be impossible for me to repeat to a lady what I would say to it."

FAIR graduate—"Which is the proper expression, 'Girls are' or 'Girls is?'"

Chorus of schoolmates—"Girls are, of course!"

Fair graduate—"Of course; pshaw!—girls, are my hat on straight?"—Puck.

"LAND sakes, Josiah, I don't wonder Florence complains about poor servants in the city!"

"Wasn't her cook good?"

"Lord! why, she didn't know enough to get the meal all at once, but kept bringin' in one thing at a time all through dinner."

THERE is a college for dentistry at St. Petersburg, Russia, and one at Wilna, at which most of the students are women; and women have during the last two years been admitted as pupils to apothecaries in Russia, with the restriction that there must not be more than one of the sex at each apothecary's.

A MEDIUM-SIZED paper pad with a lead-pencil attached hung over a kitchen table will be found a great convenience. If articles needed are written down upon this little pad they will not be overlooked. When the housewife starts for market the outside slip can be pulled off and taken with her instead of her trusting to her memory, with the danger of forgetting some simple but most important article.

WILL it pay to continue strawberry-beds more than one year? That depends much on the condition of the bed at the close of the fruiting season. If the ground is rich, the rows well filled out, the crop light and nearly free from grass and weeds, it will then usually pay to continue one, two or more years. If, however, plants are exhausted by a large yield, and grass and weeds have been allowed to grow, it will be more work to place old beds in condition than to prepare new ones.—Thayer's Bulletin.

THE Washington "Post" tells a story of one of many private secretaries in Washington, who is still new to his honors. One day a newspaper woman, full of business, burst into the office of this secretary's chief. The great man was out.

"Can you tell me when he will be in?" she asked.

"Really," drawled the clerk, "I haven't any idea."

"Well," said the newspaper woman, as she turned to go, "I must say you look it."

AN old woman in a red cloak or a Jack Tar are the two characters generally chosen for concealing dolls out of merrythought houses. The pointed top is cunningly covered with cotton to look as much like a face as possible, then the body is represented by clever padding, whilst the ends stand for legs. These trifles are seen at nearly every bazaar. Ehipty reels of cotton are sometimes turned to account by invalids as a foundation for yard-measures made out of pink tape, with the inches duly marked in ink. One tape is fastened to each reel and all round.

The youngest drunkard, it is hoped, in the world has just been brought before a London magistrate, along with his unnatural maternal relative. This "drunkard" was aged two years, and, according to the evidence, did not really love liquor, but was forced to imbibe for sociable reasons. As the mother drank to intoxication, she wished that her baby boy should share the beer, even at the peril of his life. This good lady was sentenced to twelve months' imprisonment, and the poor little fellow, who smelt of beer and wobbled so he couldn't sit up, was then taken to the work-house, to be given a sort of 'Keeley cure of milk.—Boston Herald.

It seems to me that at this moment we can dress our hair in any fashion we please. But—here comes a huge bun—it must be dressed, not merely huddled into a lump to represent the fashionable shape. Miss Mary Moore, who looked so sweet in "Rosemary," with her hair parted in the middle and arranged in veritable "bob curls" to either side of her temples, made me quite in love with the early Victorian manner. Then another fascinating being quite consoled me by her undulating waves for the loss of her ears, which were entirely buried in the rippling hair. I hear the artists in Paris are loud in complaint against this very prevalent fashion. They declare that since the vogue is copied by even the models they will soon forget how to draw this most charming feature of beauty.

ONE of the observers who should be qualified to pronounce judgment upon the state of the times about the country is the traveling circus man. One of these men, belonging to a show the name of which is well known, has said in Topeka, Kan., that in a journey of half way over the continent the business of the circus has shown an improvement over last year, and that in almost every town he has noticed a great deal of painting and fixing over of buildings. He says the people have appeared almost everywhere to be happier and in easier financial circumstances than for the past few seasons.

A PRETTY curtain was made of blue Kentucky jean. It has a border at the top formed by sewing on copper spangles with gold-colored silk, and then taking eight stitches around each one, beginning near the spangle, like the ray-like petals of a daisy. These daisy formations are at irregular distances from each other; and the border is made on a separate strip of Kentucky jean; the edges are bound with red woolen braid, which can be easily taken off when the curtain is to be washed. The border is across the top and bottom, four inches from the two-inch hem. Loops of red braid two inches long are sewed across the top at distances of two inches, and through every two loops another piece of braid, five inches long, is passed. These are fastened to wooden rings, and the curtain thus suspended from a pole has a pretty ventilating heading.

JAPAN is in haste to join the powers of Europe. She is jealous of her own little greatness, and longs to be counted in with the rest of civilization, with all her native strength. In fact, Japan has the fever of modern aggrandizement. And one symptom is well developed. She desires to ally her empire by marriage with some European state. A princess of a royal house is desired for the crown prince of Japan's wife. Failing her, for Europe is not yet prepared to give its princesses to a Buddhist, though he be an emperor's son, it is suggested that an American heiress would fill the matrimonial bill. More than one highly educated Jap has wedded an American, and, though no data is at hand to prove their mutual happiness, it may be taken for granted, as nothing to the contrary has been heard. Why, then, should the heiress hesitate to become a crown princess, and eventually an empress? There will be no bar to the girl's religion, as she may keep to it, whatever it is, only the children of this marriage must be educated in the dominant belief of the Mikado. Certainly the Japanese understand how to begin western civilization. How much better for the American heiress to marry an intellectual little Jap than the only son of a debauched duke need not be pointed out. The sins of the fathers are more often visited on the children of dukes than on some others.—Boston Herald.

TO REMOVE STAINS.

"An evil known is half overcome." So that if you ascertain the nature of the stain the evil is half remedied. Stains may be classified under three heads: 1. Animal, as oil and wax. 2. Vegetable, as fruit and wine. 3. Mineral, as iron and ink. The material may be treated as of two kinds—those that will wash and those that will not. Boiling will generally remove grease from a washing material. Perspiration (animal stain) is sometimes hard to remove from linen. If it is there after a good boil, rub both sides with yellow soap, tie a piece of pearlsh in the linen, and boil again. Expose the material to sun and air, and it will positively disappear. Discolored linen must be treated as grease-stained. The dirty appearance that "white clothes" will assume after a series of "dah washings," as the laundress calls it, or the yellow tint it gains by being laid by, can be remedied by steeping in water to which has been added turpentine, one tablespoonful to the gallon. Boil as directed, and repeat if necessary.

Tea-stains, if treated immediately, can be removed by pouring on boiling water, and then washed as usual. If dry, treat as a fruit-stain.

Hartshorn will remove fruit-stains. Turpentine will remove iron-mold, as well as grease. Ammonia will remove grease. Chlorid of lime, if sparingly used, is useful in the laundry. It should be steeped, and the water strained through muslin to clear it from "bubbles." If any of the lime escapes to the material, it burns a hole. Many laundries habitually abuse chlorid of lime, hence clothes sent out wear out sooner than those washed at home. They use it instead of boiling, considering it quicker and handier.

Salts of lemon and oxalic acid remove iron-mold and ink. Cover the stain with the powder, hold the cloth over a vessel, and pour boiling water through, then wash in the usual way.

Ink-stains, if not dry, may be covered with powdered starch moistened with milk. Leave aside for a time before washing.

Fruit or wine stains, if not dry, may be removed by rubbing in salt and then pouring on boiling water. If dry, chlorid of lime,

strained as directed, is effectual and harmless.

Powdered French chalk will absorb grease from cloth. Place the stained part over a hot iron, cover with the chalk, rub off with a clean rag, and repeat until the stain is removed. Blotting-paper answers the same purpose of French chalk.—The Princess.

PRESIDENTIAL NICKNAMES.

The nicknames of our presidents furnish an interesting example of the readiness of our people to apply sobriquets to public men whom they either like or dislike. Washington was nicknamed the Father of Our Country, Americus Fabius, the Cincinnatus of the West, Atlas of America, Lovely Georgius (a sarcastic nickname applied by the English soldiery), Flower of the Forest, Deliverer of America, Stepfather of Our Country (applied by bitter opponents during his presidency), the Savior of Our Country. Adams was nicknamed Colossus of Independence; Jefferson, Sage of Monticello and Long Tom; Madison, Father of the Constitution; Monroe, Last Cocked Hat; J. Q. Adams, Old Man Eloquent; Jackson, Old Hickory, Big Knife and Sharp Knife, Hero of New Orleans, Gin'ral, the Old Hero; Van Buren was Little Magician, Wizard of Kinderhook, Follower in the Footsteps, Whisky Van and King Martin I.; Harrison, Tippecanoe, Old Tip, and Washington of the West; Tyler, Young Hickory and Accidental President; Polk, Young Hickory; Taylor, Rough and Ready, Old Buena Vista, and Old Zack; Fillmore, the American Louis Philippe; Pierce, Purse; Buchanan, Old Public Functionary, Bachelor President, and Old Buck; Lincoln, Honest Old Abe, Uncle Abe, Massa Linkum, Sectional President, Rail Splitter, and Father Abraham; Johnson, Sir Veto; Grant, Unconditional Surrender, Old Three Stars, Hero of Appomattox, and American Caesar; Hayes, President de Facto; Garfield, the Martyr President; Arthur, Our Chet, the First Gentleman in the Land; Cleveland, the Man of Destiny and Grover; and lastly, B. Harrison, Son of His Grandfather and Backbone Ben.—St. Louis Globe-Democrat.

RICE AND CHERRIES.

A story was told of Jefferson by Mr. Vest during the Senate debate on the tariff. While minister to France from the United States, and with the tremendous events of the French revolution going on before his eyes, Jefferson "never for one instant ceased to export by sailing vessels to the United States all sorts of foreign plants and bulbs in order to improve the agriculture of the people of this country." He became interested in the culture of rice, then beginning in the Carolinas, and found a very superior quality of rice in a port of Italy.

"He was not able to procure any of it for export, because the laws of Italy prohibited its exportation, and it is said that the author of the Declaration of Independence filled the pockets of his Virginia overcoat—the old-fashioned Virginia coat, with capes to it, which our grandfathers wore—with this rice, and, to use plain language, smuggled it out of the country. The end justified the means, possibly. He carried it to Paris, put it in small packages of five and ten grains, and sent it to Charleston, S. C., and that was the basis of the South Carolina rice, the finest now in the world."

Mr. Vest had also something to say about cherries. He thinks that the finest cherries in the world are raised in the United States:

"It is said that they have cherries equal to them in France, but I have never seen them. The cherry of Washington and Oregon is the finest fruit, in my opinion, ever put into the mouth of mortal man."

Probably the famous eulogy of strawberries attributed by Izaak Walton to Dr. Butler, or Boteler, will not be discredited by the tribute of Senator Vest to American cherries, yet this last may stand for what it is worth. It certainly gave flavor to one part of the tariff debate.—New York Sun.

PSALMS FRAE HEBREW INTIL SCOTTIS.

Albert T. Bell, of the university, has lately been sent a curious book, published in Edinburgh, of interest to students of biblical lore or to devotees of the modern Scotch movement. The book is entitled "The Psalms frae Hebrew intil Scottis." The preface states, "The Buik ca'd o' Psalmus or Ilits or Kirk-sangs maun be mair nor feckly David's. Twal, ye fu' o' Asaph's; two wi' Solomon's; name are apiece wi' Heman an' Ethan's name an' are wi' roses; ane or mae by wha's no kent; mistlike, frae the suh o' them, by David. They gae a' till sangs or suhgs i' the Maker's time, wi' harps an' wi' sonndiebrods, or wi' flaes an' thairms; the blythest o' them like some hedh lilt o' our ain, an' the dulest like sane pibroch."

The well-known Psalm XXIII. appears in this fashion:

"The Lord is my herd, nae want sal fa' me:

"He lonts me till lie amang green howes; he alrts me atowre by the lown waters;

"He waukeus my 'wa'-gaen saul; He wéises

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Don't delay in sending your guess in the missing word contest. Remember that the 4 \$100 bicycles are given for the first correct answers, but EVERY ONE who guesses the missing word gets a very fine book. For a description of the bicycles write to the National Sewing Machine Co., Belvidere, Ill. See page 19 for full particulars.

me roun, for his ain name's sake intil right roddins.

"Na! tho' I gang thro' the dead-wirk-dail; e'en thar, sal I dread nae skaithen; for yoursel are nae by me; yer stok an' yer stay had me haith fu' cheerie."

The translator, the Rev. P. Hatley Waddell, promises that if he receives sufficient encouragement for his translation of the Psalms into Scotch, he proposes to proceed with the translation of the rest of the Bible. —Nebraska State Journal.

SUMMER OUTINGS.

Low-rate excursions from Michigan, Toledo and Central Ohio to Atlantic City and other Atlantic coast resorts; from Southern and Central Ohio to Mackinac Island and Niagara Falls will be run by the Columbus, Hocking Valley and Toledo Ry. Put yourself in communication with W. H. Fisher, General Passenger Agent, Columbus, Ohio, and receive full particulars.

GOVERNMENTS LIKE CLOCKS.

The following words of wisdom from William Penn are as important and applicable now as at the time when they were first uttered. They deserve universal acceptance:

"Governments, like clocks, go from the motion men give them; and as governments are made and moved by men, so by men they are ruined, too. Wherefore governments rather depend upon men than men upon governments. Let men be good, and the government cannot be bad; if it be ill, they will cure it. But if men be bad, let the government be ever so good, they will endeavor to warp and spoil it to their turn. . . . That, therefore, which makes a good constitution must keep it; that is, men of wisdom and virtue, qualities that, because they descend not with wordly inheritances, must be carefully propagated by a virtuous education of youth; for which after years will owe more to the care and prudence of founders and the successive magistracy than to their parents, for their private patrimonies.—Lutheran Observer.

WHEN YOU WEAR A SHIRT WAIST.

Don't wear Bone or Agate buttons with your shirt waist or wear studs of one pattern and cuff-buttons of another. The proper thing is a set of seven pieces—three studs, collar-button, links for cuffs and a belt pin all of one design, Roman Gold or Sterling Silver plate. Such a set is offered by Robt. H. Ingersoll & Bro., Dept. 16, 65 Cortlandt street, New York, and will be sent to any one who will send 10 cents, to cover cost of postage and packing on the set, and their Mammoth Catalogue of 1,000 useful and interesting articles.

Queries.

READ THIS NOTICE.

Questions from regular subscribers of FARM AND FIRESIDE, and relating to matters of general interest, will be answered in these columns free of charge. Querists desiring immediate replies, or asking information upon matters of personal interest only, should inclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query, in order that we may answer by mail if necessary. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

Making Ice-cream.—C. H. S., Bradley county, Tennessee, writes: "Can you give me a recipe for making first-class ice-cream?"

REPLY BY T. GREINER:—Ices and ice-creams can be made in a hundred different ways, and flavored with extracts made of conlar or with natural fruits and fruit-juices, with chocolate, etc. Tastes differ so much that it would not do for me to pick out one recipe and recommend it as first-class. Good recipes are given with each ice-cream freezer, and found in each good cook-book. Get, for instance, a copy of the "Standard Cook Book," published by the FARM AND FIRESIDE, which is a most excellent one, and can be had as a premium for sending a subscription to the publishers at Springfield, Ohio.

Planting Winter Onions.—C. E. T., Butler county, Pennsylvania, asks for information about planting winter onions in the fall.

REPLY BY T. GREINER:—The sets may be planted any time in the fall or as soon as they can be had. Prepare the land as you would for any other onion, although it will not be necessary to make it as rich. Wood ashes, horse and cow manure make good fertilizers for any garden crop. Have rows a foot apart, and plant the sets about two inches deep and three inches apart in the rows. If the situation is warm and favorable, you will be sure of having plenty of hunch onions as long as you keep the bed going.

Canning Corn and Tomatoes.—A. C. S., Bremen, Ohio. The process used by commercial canners is hardly suitable for the kitchen. There seems to be more or less of a mystery about the commercial process, anyway, for the flavor, or want of flavor, of the tomatoes that one buys in tin cans at the grocer's is alone sufficient evidence that preservative drugs are used, such as salicylic acid, boracic acid, etc. The canning of green vegetables in glass jars does not seem to be such a simple and safe matter as the canning of fruits; and yet we sometimes succeed in having canned tomatoes keep nicely, and come out with all the fine flavor of the fresh article. With sweet corn we have seldom had good success. I have been in hopes that we would get some reliable information on this subject from Cornell University, where some experiments were being made. Who knows a sure way of canning sweet corn?

Tornado Gang-plow.—W. R. C., Carbon county, Montana, asks for more information about the "new idea in plowing," also whether the cutaway disk-harrow is superior to the plain disk.

REPLY BY T. GREINER:—I have just received a new attachment which is said to aid in turning the furrows. Thus far we have not been able to do good work in plowing sod, and the machine was not intended for that purpose. Whether the new attachment will make sod-plowing practical or not I cannot yet tell. You want a heavy team, or perhaps better three horses, to work this implement. As to the merits of the cutaway and plain disk-harrow, I think each tool has its place. In some soils one will do better work, in other soils the other will. On our loams here the plain disk is the thing.

VETERINARY.

Conducted by Dr. H. J. Detmers.

To regular subscribers of FARM AND FIRESIDE answers will be given through these columns free of charge. Where an immediate reply by mail is desired, the applicant should inclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Querists must be received at least two weeks before the date of the issue in which the answer is expected. Subscribers may send their veterinary queries directly to Dr. H. J. Detmers, 1315 Neil Avenue, Columbus, Ohio.

Note.—Parties who desire an answer to their inquiries in this column must give their name and address, not necessarily for publication, but for other good reasons. Anonymous inquiries are not answered under any circumstances.

Trouble with Cows.—A. J. R., Alva, O. T. It is difficult to advise you. Of course, if your bull abuses the cows, the former must be removed to a place away from the latter, and the cows when in heat be taken to him to be served, and then immediately be returned to their pasture.

A Tumor.—F. C. M., Savannah, Mo. As the tumor in the nose of your horse can, if at all, be removed only by a surgical operation, and, moreover, may be of a malignant character, the best you can do will be to call on a competent veterinarian to examine the case, and, if feasible, to perform the operation.

A Diseased Eye.—O. M. H., Newport, Me. If you had given me a fair description of the condition of the eye of your mare I might have been able to give you a more satisfactory answer. As it is, I cannot advance any opinion beyond saying that such old and inveterate cases, as a rule, are hopeless.

Possibly Mange.—H. V., Kiowa, Neb. If your pigs are not otherwise ailing, the skin disease you describe closely resembles mange. First wash the pigs with soap and warm water, and then with a five-per-cent solution of creolin in water. Repeat this treatment once every five days; but in order to prevent reinfection, put the pigs after every wash into a clean and disinfected pen.

Obstructed Lacrymal Canals.—G. P. G., Cannonburg, Ohio. If the lacrymal canal (membranous tube which conducts the tears from the inner angle of the eye into the lower part of the nasal cavity, and the lower opening of which can be plainly seen through the nostril) is closed or obstructed, you will have to employ a competent veterinarian to reopen it.—Moon-eyes is another term for periodical ophthalmia, and must be considered incurable.

Hemorrhage from the Nose.—E. B., Iberia, Mo. Hemorrhage (bleeding) from the nose in pigs is a frequent symptom of severe and usually fatal cases of swine-plague, which, however, are always also attended with other conspicuous symptoms, particularly such as result from a severe affection of the respiratory organs. If, as you say, bleeding (from the right nostril) is the only observable symptom, I cannot answer your question, and advise you to make a careful post-mortem examination of the first pig that dies, and to pay special attention to the condition of the respiratory organs.

Swine-plague.—W. H. S., Augusta, Ill. Your pigs are dying of swine-plague, or so-called hog-cholera. You should not allow them to run at large, for by doing so not only your whole farm will become infected, but the disease is thus also given an opportunity to spread over the whole neighborhood. If there are yet some of your pigs which are not affected, and you have a place left on your farm that is not yet infected, you may be able to save some of the apparently healthy pigs by promptly removing them to the non-infected place, and keeping them there in every respect strictly separated.

Dog-distemper.—M. J. P., New Orleans, La. If dog-distemper has become chronic and productive of paralytic symptoms, morbid changes are existing which cannot be repaired; a treatment, therefore, is seldom of any avail, and if anything at all is expected in such a case, the treatment, which at best can be only a symptomatic one, requires constant superintendence, and cannot be of a general character and be prescribed from a distance. By far the best will be to get a new dog, or if expenses are no object, to send the animal to a well-equipped dog hospital, where possibly some improvement can be effected.

Cruelty.—J. H. S., Walton, Texas. Your cow evidently was in misery, and perhaps had tried to eat some thorny plant—a prickly-pear or something else full of thorns—which got stuck in her tongue somewhere in the mouth or pharynx, and instead of endeavoring to relieve her you committed an act of downright cruelty by scraping and wounding her tongue and putting salt and black pepper into the wounds, sawed off her horns and split her tail, all for the purpose of fighting an imaginary evil that has no existence; namely, "hollow horn" and "worm in the tail." I suppose you will write indignant letters like the "lampass" men, but never mind, there is abundant room in my waste-basket.

A Tumor.—A. J. L., Boise, Idaho. You say your mare has a tumor of the size of a hen's egg near one of her teats, which tumor you think is a growing cancer. If such is the case, there is but one way of removing it; namely, by a carefully performed surgical operation. If your mare, which you say is ten years old, is white or gray, and the tumor is black, the latter is a melanoma, a morbid growth which may exist for a comparatively long time without doing much damage, provided it is not interfered with in any way whatever. Of course, a melanoma, too, can be removed by a surgical operation, but the trouble is, if there is one on the surface of the body there are usually several in the interior, which are apt to make up for the loss by a more vigorous growth if the one on the surface is removed.

A Very Fatal Disease.—W. B. H., Fernwood, Miss. The symptoms of the very fatal disease of your cattle, as given by you in your communication, somewhat resemble those occurring in anthrax (or charbon of the French), and I would hardly hesitate to say that it must be anthrax. If you had given a description of the blood as found in the dead animals, and had described it as black, non-coagulated, tarlike and somewhat iridescent on the surface if exposed to sunlight. Please write again, and give a good description of what is found at the post-mortem examination, but caution the person who makes the same to be careful not to cut himself, and when through with it, to thoroughly wash and disinfect his hands, and his clothes that may have become soiled, because anthrax is not only one of the most fatal diseases, but can also be communicated, especially through wounds and lesions, to other animals, and even to human beings. Still, it may not be anthrax. Certainty can be obtained if the blood is microscopically examined by a bacteriologist or by one familiar with the appearance of bacillus anthracis, and also by inoculating a rabbit with a minimal quantity of the blood.

External Otitis.—J. O., Nekoma, Ill. What you describe is external otitis, or so-called internal earworm. It is a frequent disease in long-eared dogs, and easily cured if not of long standing (not chronic), and if the morbid process does not extend beyond the inner lining of the external ear to the tissues beneath. If, on the other hand, the bones have already been affected by the morbid process, the disease is practically incurable. In cases of recent origin, and in which the seat of the morbid process is yet superficial, it will be sufficient to thoroughly wash, at least once a day, the whole internal surface of the external ear with a mixture of acetum plumbicum and water, 1 to 12, and then immediately wipe dry all the recesses in the external ear with a small "surgeon's" sponge. If any excoriations or sores are found, their surfaces should be touched with a stick of nitrate of silver. This treatment must be continued until all exudation ceases. In chronic cases the interior of the external ear must first be thoroughly cleaned with soap and warm

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ommends a hypodermic injection with physostigmine. As to your horse, as he is now I do not think that much can be accomplished by any treatment, and it is almost a wonder that he is yet alive. It is possible that rest and good care will effect some improvement, but it is exceedingly doubtful whether he will sufficiently recover to be worth anything. The hard swelling on the shoulder was probably caused by bruising while the horse was down.

Puerperal Paralysis.—M. C. H. I., Amityville, N. Y. The disease you describe is puerperal paralysis, also known as calving-fever, milk-fever and by several other names. It usually attacks cows which are first-class milkers, and are at the time of calving in a first-class condition as to flesh. It is therefore considered as essential to keep the cows thus predisposed on a rather light diet during the last six weeks before and the first three or four weeks after calving. Further, as it is beyond a doubt an infectious disease in which the infection is taking place through the uterine mucous membrane, it stands to reason that many an infection will be prevented if the cows, at any rate at calving-time and while calving, are kept in a dry, clean and well-ventilated place, and if they are left there for four or five days or until all danger has passed. If in spite of these precautions the disease should make its appearance, it is advisable to carefully inject, as soon as the very first symptoms of the disease can be observed, into the uterus of the cow about two quarts of a blood-warm 0.75 per mille (1 to 1,500) solution of corrosive sublimate in clean water. In preparing and in making the injection metallic vessels and a metallic syringe must be avoided. Where the disease is very frequent, and therefore great danger is apprehended, it may be well to make such an injection into the uterus of every cow as soon as she has calved. Where the disease has fully developed not much, if anything, except by good care and by warding off exposure to draft and unnecessary irritation, can be accomplished by any treatment. This, at least, is the general experience, for no matter what the treatment may be, about sixty to seventy per cent of the patients will die, and about thirty to forty per cent will recover.

4 BICYCLES TO FARM AND FIRESIDE FOLKS FREE....

On page 19 will be found the full particulars of our Missing Word Contest for July. How many can guess the missing word in the following sentence? "The inhabitants of our country have lately had a useful lesson on this subject." Try it. If you guess it you will get a very fine book, and if you guess it first you will get a bicycle free. See conditions and particulars on page 19.

Each contestant must accept some of our subscription offers in either this or previous issues of Farm and Fireside. The guess must be sent in the same envelop with the subscription. Below are some very liberal offers.

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Smiles.

TO THE POINT.

The nursery door was open.
And looking in I smiled
To see my little daughter
Rebuke a Zulu child
Depicted in the paper
She held within her hand,
As if the senseless image
Her words could understand.

The simple garb of nature
Was dress enough for him.
But she with childish horror
Surveyed each naked limb,
And said, as if the contrast
Between their lives she drew,
"Put on your nightgown, baby!
Put on your nightgown, do!"

Now, when at social functions
Too lavishly displayed
I see the charms of nature,
Like her, my little maid,
Immodesty rethinking,
I faint would utter, too,
The childish malediction,
"Put on your nightgown, do!"
—Helen Chauncey, in Judge.

SHE SPANKED FOR THE FAMILY.

PEOPLE never get encouragement for doing the good Samaritan act in the interests of the public, as the man decided who offered to assist a distracted woman and ameliorate the sufferings of a lot of people on a suburban car.

The boy who howls was in evidence, the curled darling of his only own mother and the terror of everybody else, and he had kept the car in a state of wild excitement and exhausted the patience of everybody, including his doting parent.

"Oh, if your father were only here!" she had said for the fiftieth time, as she tried vainly to restrain the howling terror.

At that he stopped howling long enough to beat the air with his small shins, and the woman on the other side of him remarked audibly that a cage was the proper place for savages like him.

"Johnny, dear," asked his mother, "won't you be a good boy?"

Roars and kicks from Master Johnny.
"Oh, I wish your father were here to give you a good trouncing this very minute!" she wailed as she struggled with him.

Then it was that the philanthropist of the company asserted himself. He had been trying in vain to read his morning paper ever since he started from home.

"Allow me, madam," he said, blandly. "I am a father myself, and I will be happy to chastise your cherub in behalf of his absent parent."

"Oh, no, you won't, not if I know it!" said Johnny's mother, rising in her wrath like a tigress. "There ain't that man living dare lay a finger on that boy—his own father or any other ugly old catamount who thinks he knows it all," and she shut off debate by going into the next car and taking the sweet infant with her.—Chicago Times-Herald.

A STEP-LADDER WENT WITH THE MATCH-SAFE.

"Do you see that thing on the wall there? Above the clock? That thing with ribbons on it?"

"Yes; what is it?"

"That's a match-receiver. It is intended to receive burned matches. For instance, suppose I use a match. I extinguish the match and put it on the table. Then I go across the street and borrow a step-ladder. I bring the step-ladder into this room, move the sofa away from the wall, plant my step-ladder and carry that piece of burned match up the ladder and drop it into the receiver. Then I come down from the ladder, put the sofa back in its place, take the step-ladder home, and there you are? I tell you it's a great thing to have these handy little articles around the house."—Chicago Record.

NOT QUITE CORRECT.

"Have you traveled far?" asked the sympathetic farmer's wife.

"Pretty considerable distance, ma'am," answered the bigger of the two tramps.

"You look," she pityingly observed, "as if you were wayworn and weary."

"That's where you're a little off, ma'am," said the big tramp. "This is weary all right enough, but I'm not Wayworn; he's my brother."—Cleveland Plain Dealer.

An Artistic Brochure entitled "Summer Outings" is published by the Nickel Plate Road, describing vacation resorts along that line. Address B. F. Horner, General Passenger Agent, Cleveland, Ohio, for a copy.

WHAT JAMES WAS READING.

"James, dear, will you bring me up a sentle of coal from the cellar?" said a busy wife.

"That's just the way with you," said James, with a frown, as he put down his book and rose from the arm-chair.

"Just the way with me?"

"Yes," he snapped. "As soon as you see me enjoying myself you have something or other for me to do. Didn't you see I was absorbed in my reading?"

"Well, dear, I will do it myself."

"Yes; and tell everybody—you're mother especially—that you have to carry your own coal up from the cellar. No, I'll do it. Let me mark my place."

So he marked the place in the book at which he had ceased reading, and when he went down to the cellar, grumbling all the way, she picked up the volume, and found it was a love-story, and that the passage that he had been absorbed in was as follows:

"My darling, when you are my wife I will shield and protect you from every care. The winds of heaven shall not visit your face too roughly; those hands shall never be soiled by menial tasks; your wish shall be my law; your happiness—"

Just then he reappeared, and, dropping the scuttle upon the floor, said:

"There's your coal! Give me my book."—Tit-Bits.

LITTLE BITS.

"It will only take a few good real summer days," mused the ice-cream soda, "to make me a hot favorite."—Indianapolis Journal.

A soldier who remarked he had been in seven engagements was interrupted by a small boy who said his sister had been engaged eleven times.—Tit-Bits.

Mrs. Mulcahy—"And so your cow is sick?"

Mrs. Burke—"She is, and it makes it hard for meself and the children. We have no milk at all; I have to sell it!"—Boston Transcript.

She—"How do you account for the enormous increase of the English sparrow in America?"

He—"They're too ugly to go on women's hats."—Chicago Record.

"Willie Washington," said the friend, "is one of those people who tell everything they know."

"Yes," replied Miss Cayenne, wearily, "and he doesn't talk very much, either."—Washington Star.

New servant—"I found this coin upon your desk, sir."

Master—"I'm glad you are honest. I put it there purposely to test your honesty."

New servant—"That's what I thought."—Fliegende Blätter.

The parson—"Your neighbor looks like a very persistent man. He doesn't look as if he would give up anything."

The deacon—"Well, I've been passin' the plate for hard on ten years, an' I never see him give up anything yet."—Yonkers Statesman.

"I understand their engagement has been broken."

"Yes. She says she was deceived. He had only six century runs to his credit instead of sixteen, and as she had fourteen herself, he was clearly out of her class."—Chicago Post.

Papa—"I am surprised that you are at the foot of your class, Tommy. Why aren't you at the head sometimes, like little Willie Bigbee?"

Tommy—"You see, papa, Willie's got an awfully smart father, and I guess he takes after him."—Northwest Magazine.

"I was surprised to hear that Penelope had broken her engagement. I thought she was determined to stick to him in spite of the opposition of her father."

"She was, but the idiot wrote her some poetry, as he called it. And he rimed her name with 'let us then elope.' That settled him."—Cincinnati Enquirer.

Voter—"I challenge Shamus Macfogarty. He's no Dimulicrat."

Chairman—"Give in yer ividence."

Voter—"His wife borrows butter of Mrs. Robinson, a Republican."

Chairman—"But I hear she niver pays it back. Yer all right, Mr. Macfogarty. Ye can vote."—Boston Transcript.

When Governor Sam Houston first visited Washington he dined in a starched collar with the president of the United States and the leading politicians. At the dinner he tasted champagne for the first time in his life. "Forty-rod" whisky was good enough for politicians where he came from. But he enjoyed himself, and drank his share of the wine. Toward the end of the dinner olives were handed around. Houston had never seen olives, but tried one and put it back upon his plate. The president looked down the table.

"How are you getting on, Governor Houston?" he asked.

"Well, president," said Sam, "I like your elder, but darn your peckles!"—Wave.

She—"What a little month your young lady friend has! It doesn't look large enough to hold her tongue."

He—"It doesn't."—Tit-Bits.

"After my experience with Tom Reed," said the Populist congressman, "my wife will have no terror for me."

"But I don't see the comparison," quoth his friend.

"Then you don't know my wife. She never lets me get a word in edgeways."—Cleveland Plain Dealer.

A girl went to a neighboring divinity school, intending to study for the ministry. Now she says that she thinks her "studies have perhaps fitted her to occupy the place of a minister's wife better than if she had not studied theology." The theological graduate who is soon to become her husband believes in co-education.—Boston Transcript.

"My husband is so nice about explaining these war terms to me! I know I aggravate him awfully, too, sometimes. Why only think! I had to ask him this morning what the seat of war was for!"

"Yes?"

"Wasn't it foolish! But he is so patient. The idea that I didn't have sense enough to see that it is for the standing army to use when it gets tired!"—New York Press.

"May I ask what is going on in the village?" inquired the observant stranger.

"We're celebratin' the birthday of the oldest inhabitant, sir," replied the native.

"She's a hundred and one to-day, sir."

"And tell me, pray, who is that little man with the dreadfully sad countenance who walks by the old lady's side?"

"That's her son-in-law, sir. He's been keepin' up her life insurance for th' last thirty years."—Cleveland Plain Dealer.

Pale and proud she stood before him. In fact, she had him in the corner, and he could not depart.

"Do I get a '97 wheel?" she asked, and in her tone there was a threat veiled, even as the quinine may be masked by the liquid softness of the rock and rye.

"No," said the wretched man, in desperation.

"Then," said she, her voice as hard as the inside of a hall bearing. "I shall see my lawyer to-day. I will buy that wheel out of the alimony."—Indianapolis Journal.

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"RUNNING"

[This is not the missing word]

John Smith (boy)

Jonesville

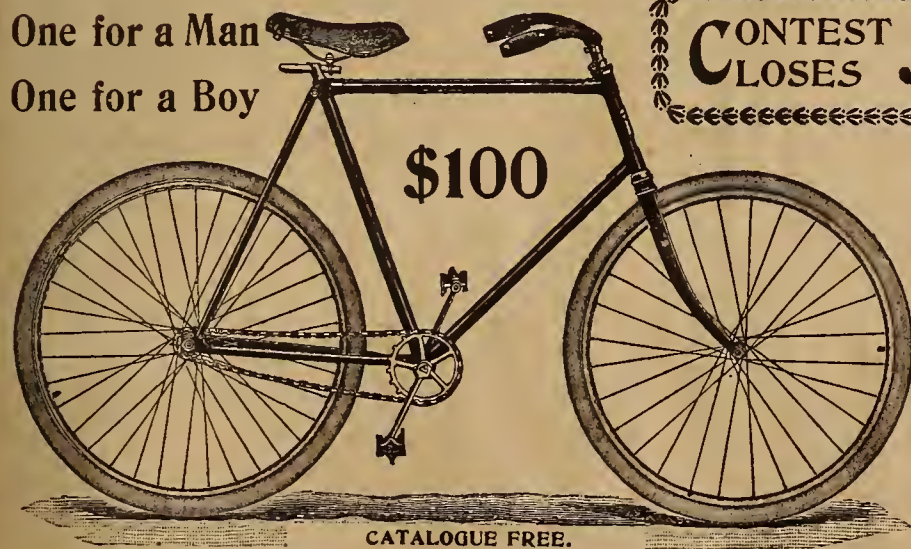
Brown County

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What is the Missing Word?
SEE PAGE 19.

Humor.

WHEN IS SHE LIKE A WORM?

"Where are those golf shirts of mine?" demanded Mr. Griggs.

"Why, dear, I forgot to tell the laundryman to bring them home to-day," explained Mrs. Griggs. "But they'll be home to-morrow, sure."

"Humph! To-morrow! I want one to-day. Do you think I want to swelter in one of these starched straight-jackets? Where's my summer suit? Did you have the girl crease the trousers and press out the coat?"

"No, I didn't think of it, dear, but I'll have it done to-day."

"That's it. Forget that I'm alive. I suppose you want me to wear my winter suit all summer. There are my gloves unmended yet. I suppose you forgot them, too. Did you darn any socks for me?"

"No, I didn't know you had any that needed darning."

"And you forgot to find out. Is there anything you can remember?"

"I was busy cutting down a pair of my stockings for baby to wear to-day. Did you buy her any, as I asked?"

"No, I didn't think of it."

"What meat did you order for dinner?"

"I haven't ordered it yet, but I will when I go down town."

"You know it is too late now. Here's that letter I gave you yesterday morning to mail. Did you forget it?"

"No. Carried it on purpose. Confound it! Why don't that water run?"

"Because you forgot to pay the bill after the last notice, and it has been turned off."

"Well, how am I to wash my face?"

"Do as I had to do. Go up-stairs and beg a pitcher of water from the people on the next flat."

Mr. Griggs grabbed his hat and rushed away down town without a handkerchief or the keys to his office.—San Francisco Post.

THE JOKE WENT INTO THE RECORD.

"Now, your honor," argued the attorney in the court of Justice Brown, of Santa Rosa. "I move dismissal of this case on the ground that the corpus delicti has not been established."

Judge Brown rubbed his chin in a perplexed way, fixed his gaze on the ceiling for a moment, and then, clearing his throat, said:

"Of course, it is an old principle of law that the probator must correspond with the alligator, and in this case I am of the belief that the corpus is all right, but I don't know about the delicti."

"Your honor, I want that to go into the record," demanded the opposing counsel. "I want the record to show that your honor said the corpus is all right, but you do not know about the delicti."

Judge Brown realized that he had blundered, and sat staring at the attorney for a moment. Then, pulling himself together, he said:

"All right, let that go into the record, but you fellows know danged well I was only joking when I said it, and that will go into the record, too."—San Francisco Post.

A LONG SHOT.

"Great sporting town, isn't it?" he said when he came down to breakfast. "Everybody invited to gamble; book-makers very enterprising. When's the race? Saw the odds posted on the back of my door this morning."

"On the back of your door?" said the clerk.

"Yep," he answered. "Dinner twelve to two. That's somewhat of a long shot."

The clerk passed the bromide bottle.—Buffalo Enquirer.

A DELAYED EFFUSION.

"Fellow tried to work the editor yesterday."

"How was that?"

"Offered him a manuscript poem called 'Marco Bozzaris' for two dollars."

"What did the old man say?"

"Said the fellow had made the mistake of his life in not writing the poem two months ago."—Cleveland Plain Dealer.

FORGIVEN.

Mrs. Suburbs (hysterically)—"John, you thought I didn't see you, but I did. You kissed the maid!"

Mr. Suburbs (reproachfully)—"But, my dear, you asked me to try to persuade her to stay another week!"

Mrs. Suburbs (eagerly)—"Tell me, quick, John dear, did she promise?"—Truth.

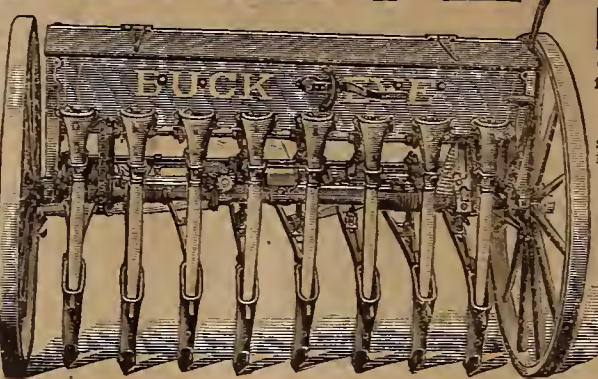
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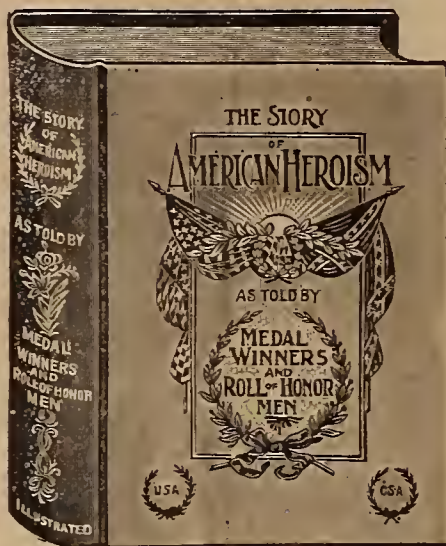
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AUGUST 1, 1897.

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If the result for an expected large harvest of and demand for Indian corn prove similar to the conditions affecting wheat, the prospects of the planter and the farmer will indeed be favorable; but the Indian corn crop will be subject to damage until the middle of September. The present wheat outlook is for the continuance of declining stocks throughout the world during July, and with unfavorable reports as to foreign wheat crops the prospect is bright for the holders of wheat. But whatever the gains of the latter, nothing should prevent the far-sighted American wheat-farmer from participating in the very beginnings of the coming business prosperity."

THERE can be no prosperity in this country as long as corn sells at fifteen to twenty cents a bushel on the farm," is a declaration which is frequently heard from that class of individuals who are soaked through and through with the chronic business pessimism of the times," says the Kansas City "Star." "These persons overlook the fact that a large proportion of the tremendous corn crop raised in this country last year has netted the judicious farmer a great deal more than fifteen or twenty cents a bushel, because it has been made into meat on the farm, and has come to market in stock-cars instead of in grain-cars.

"The daily receipts of live stock in Kansas City amount to over four hundred car-loads, and each car-load of stock has consumed a good deal more than a car-load of corn. The amount of corn marketed in Kansas City in the form of cattle and hogs is about three times the amount that comes here to be sold on the grain market. The statistics of the United States Department of Agriculture show that only a little more than twenty-five per cent of the corn crop of the United States is sold by farmers to go beyond county lines. The rest is retained at home to be fed to stock, so that three fourths of the corn crop depends for its value on the selling price of live stock, not on the market quotations for corn.

"The present prices of fat cattle and hogs are high enough to make corn worth from twenty-five to fifty cents on the farm. The experience of all feeders is not alike. There have been many bunches of cattle sold in Kansas City recently which netted as high as fifty cents a bushel for the corn fed to them, and little stock returns less than an equivalent of twenty-five cents a bushel for the corn on which it was fattened. It is plain, therefore, that the low price of corn on the market is not a good reason for despairing of a return of prosperity.

"It is evident from other facts that cheap corn is not greatly impeding the accumulation of wealth on the farm. That a majority of farmers in the West are making a good deal more money than they spend for living is proven by the great volume of indebtedness that is being paid off in the West without resulting in the withdrawal of money from this section. Bank deposits are increasing in western cities as well as in eastern cities, and in country towns as well as in the centers of trade in the West. There is not the slightest doubt that the extreme depth of agricultural depression was reached some time ago, and that the upward turn is now under way."

THE Department of Agriculture has issued a farmers' bulletin on the probable wheat production of the world for this year, and the price which may be expected. The prospects of the American wheat-grower are extremely encouraging. Reports from all sections show that the outlook in this country is excellent, as regards quantity, quality and price. Abroad the indications are that the great wheat area of Russia will produce but a small and totally inadequate crop; that Austria-Hungary, France, Turkey, Italy, England and Argentine will all have light crops. From these countries comes the surplus of wheat which fixes the price of the world's supply; but instead of a surplus above home consumption the indications point to a large deficit.

At home the conditions were never more favorable. Carefully prepared estimates indicate a total yield of over 550,000,000 bushels, and good prices may be confidently expected.

The bulletin also shows where our exports of wheat go, and what the prospects are for an increased market for wheat in the Orient. The general tenor of the report is extremely encouraging to the American farmer, not only for this year's prospect, but looking to future years. The report suggests that the rapid change which is taking place in the civilization of Japan and China, and the raising of their standard of living in those countries, is opening an increasing market for wheat, and that the American farmer should claim his share at least. The most significant indication in this line is the remarkable manner in which our exportations of wheat to eastern Asia have increased during the decade just closing. Most of this is shipped in the form of flour. The total shipments of wheat-flour to Japan and China during the ten years ended June 30, 1897, according to the Treasury Department figures, amounted to 6,000,000 barrels, and by far the larger part of that was shipped during the latter half of the decade. In 1896 the shipments reached nearly 1,000,000 barrels. The indications are that the shipments for 1897 will be somewhat in excess of 1,000,000 barrels, which would be equivalent to more than four and one half million bushels of wheat. Of these shipments the bulk has gone to Japan, the people of that country having progressed much further in the scale of civilization than those of China.

IN a recent speech an ex-senator, referring to proposed remedies for hard times, said:

"The new-fangled political patent medicines of the hour which are offered to us on every hand deserve to be carefully scrutinized before we swallow them. The old constitutional remedies of our fathers may perhaps be better for us, after all. The unscrupulous or mischievous modern philosophers who vainly propose to benefit mankind by the remarkable feat of abolishing all poverty may possibly enrich themselves, while their deluded followers become poorer. There is too much demagogism abroad in the land; there is too much false doctrine taught pertaining to governmental functions; there is too much encouragement of the spirit of social crime and all that it implies, including communistic and chimerical schemes for a 'social democracy,' so called; there is too much toleration of disrespect for courts and constituted authorities; there is too much clamor for class legislation; there is too much inculcation of the idea that men can become rich without effort—by the mere fiat of the government instead of earning wealth in the old-fashioned way; and there is too much attention paid to cranks, blatherskites and political adventurers entitled to no consideration, but who seem to have obtained the public ear, and are seeking to pull down the pillars of society."

PROSPERITY in agriculture is the basis for prosperity in all other lines of business. When the farmer is well rewarded for his labors the merchant and the manufacturer, the employer and the employee all prosper. Week by week the evidences of returning prosperity multiply. There is no wild "boom," fortunately, but there continues a steady, gradual improvement that will soon put this country into a highly prosperous condition.

With bountiful harvests and advancing prices the farmers now see clearly the way out of depression, and hope has taken the place of despondency. Of farm products a few, like hay, are lower in price than one year ago; some, like corn, are the same, but wheat, oats, potatoes, cotton, wool, sheep, cattle and others are decidedly higher in price. Taking together the important farm products, the farmers will get for them twenty or twenty-five per cent more money this year than in 1896.

UNDER the heading "The Farmer Leads," Bradstreet's of July 10th has the following editorial:

"Notwithstanding domestic wheat-crop reports pointing to a harvest of 575,000,000 bushels, 100,000,000 bushels more than last year, the price of wheat gives signs of advancing along the lines laid down for it by some of the constitutional bulls. The world's stocks of wheat amount in round numbers to only 75,000,000 bushels, one of the smallest totals at a corresponding date for many years. This is the more significant when it is recalled that available stocks, not only in the United States, but in Europe, represent to-day a much larger proportion of total supplies, visible and invisible, than they did ten years ago, owing to the increase in facilities for public storage. Foreign buyers have evidently been impressed by recent reports from Russia, Germany, France and Hungary pointing to decreased wheat harvests this year. India, it is thought, will hardly supply more than she requires for her own consumption, and little is counted on from Austria and Argentine Republic.

"This brings the United States to the front as a prominent wheat exporter under somewhat similar conditions to those which existed in 1879, a period of revival from the preceding great panic after five or six years of retrenchment and economy. At that time European supplies of wheat were very generally short, and those in the United States unusually bountiful. We had passed through the period of recuperation following that of overinflation and speculation, even as we have within the last four years. The most encouraging feature of the situation to-day, then, is found in the advancing price of wheat during the harvest season. It will be difficult for newspapers with axes to grind to make the point this year that the advance in the price of wheat is going to the speculator and elevator owner instead of to the producer. It is the American farmer who is to profit first by the statistical situation of the cereal this time; and with the improvement in the material welfare of the American agriculturist must and does begin the improvement of general trade throughout the country.

FARM AND FIRESIDE

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NOTES ON RURAL AFFAIRS.

Our Friend the Toad. For many years I have been putting in a good word now and then for the toad. I am fully convinced that it is not only a harmless creature, but really a very useful one—useful especially to the gardener. If you are one of those who have a strong prejudice against the toad, either because it is ugly in appearance or poisonous in reputation, or who have to hit at anything right and left that flies, hops or creeps about on the premises, whether it be large or small, injurious or beneficial, then let me ask you to put the homely creature to the test. Put a low frame around a hill of squashes or other plants that are pestered with bugs or beetles or lice, etc., and then catch a toad, and put it into the inclosure as a watchman. There is not an insect that will stay there long. I have made use of toads in this capacity in my hotbeds and cold-frames for years. As an insecticide the toad is a brilliant success. Because of this long-time experience and acquaintance with the ugly creature I was glad to see Bulletin No. 46, issued by the Massachusetts experiment station (Amherst, Mass.). It treats on "the habits, food and economic value of the American toad." Some extracts may be interesting.

* * *

The bulletin sums up the evidence in regard to the economic value of the toad as follows, first on the debit side: "1. It destroys carabid beetles, insects of a highly beneficial character. 2. It devours an occasional ichneumon-fly and ladybird, beneficial insects. 3. It feeds to a small extent on spiders, generally considered to be valuable as insect-destroyers. 4. It devours carrion-beetles, insects indirectly helpful to man." The credit side is thus stated: "1. It feeds on worms, snails and sow-bugs, common greenhouse pests. 2. It devours a large number of myriapods, which damage greenhouse and garden plants. 3. It feeds to some extent on grasshoppers and crickets. 4. It destroys large quantities of ants, insects often injurious, and usually obnoxious. 5. It consumes a considerable quantity of May-beetles, rose-chafers, click-beetles, potato-beetles, cucumber-beetles and weevils, all

more or less injurious to crops of various kinds. 6. It feeds on tent-caterpillars, gipsy-moths and other fruit-tree pests. 7. It is a prime destroyer of cutworms and army-worms, common pests which often cause great damage. To recapitulate, eleven per cent of the toad's food is composed of insects and spiders beneficial or indirectly helpful to man; eighty per cent of insects and other animals directly injurious to cultivated crops or in other ways obnoxious to man."

* * *

We will see the merits of the toad in still stronger light when we come to consider the voracious appetite and the marvelous digestive powers of our friend the toad. Professor A. H. Kirkland, the assistant entomologist to the gipsy-moth commission of Massachusetts, who wrote this treatise, says: "During the past two years the writer has made many observations on toads feeding under natural conditions at all hours of the night. From these observations and from stomach examinations it appears that the toad feeds continuously throughout the night, except when food is unusually abundant. In twenty-four hours the amount of food consumed is equal in bulk to about four times the stomach capacity. In other words, the toad's stomach is practically filled and emptied four times in twenty-four hours. This I have verified by studies on toads confined in cages."

* * *

"A toad feeding at this rate, and upon the same kind of food (as found in some of the stomachs of which were examined), would devour in the three months of May, June and July the following quantities of food: 3,312 ants, 2,208 cutworms, 1,840 myriapods, 2,208 sow-bugs, 368 weevils and 368 carabids. Or, in other words, in the three months a toad would consume 368 beneficial insects and 9,936 injurious insects—myriapods, etc. . . . If we assume that ten per cent of these insects, eaten by a toad feeding under the given conditions, would have been killed by the carabid beetles which the total also devours, we still have the destruction of 1,988 cutworms to place to the toad's credit. If the damage the cutworms would have caused be estimated at one cent a worm, a figure which gardeners and tobacco-growers will probably consider ridiculously low, we find that in one season a toad might destroy cutworms which otherwise would have damaged crops to the extent of \$19.88."

* * *

Much of this, however, is speculative figuring. The great majority of cutworms, feeding on grasses, weeds, etc., never do us any appreciable damage. It is only the occasional one that gets into a cabbage or tomato patch, etc., and is not caught in time, that will injure us to the extent of a cent. Then again, one cutworm may destroy choice plants worth a quarter or more. Yet if each of the thousands of toads on a farm would save the owner \$19.88 in three months, the latter would be on the royal road to fortune, and in danger of becoming a millionaire. No use in indulging in such fanciful and misleading figuring. What has been stated, however, should be enough to convince any landowner of the economic value of the despised toad. How the toad may be made useful is told in the bulletin as follows:

"Every gardener should aim to keep a colony of toads among his growing crops, and the practice of collecting and transferring them to the gardens is a commendable one. While the sense of locality is strong in this batrachian, and it will often return over considerable distances to its original haunts, yet it may be induced to remain in new quarters if there is a sufficient food supply. Many farmers provide toads with artificial shelters made by digging shallow holes in the ground and partially covering them with a bit of board or a flat stone. In such places toads will often remain for many days, sallying forth at night to seek food. In greenhouses the toad may be made of particular value as a destroyer of snails, sow-bugs, myriapods, cutworms and weevils."

* * *

Forage Crops. The Cornell University experiment station has just issued a timely bulletin on forage crops. It comes from the pen of Professor I. P. Roberts, this great leader in

agricultural progress, and Professor L. A. Clinton, with whom most of our readers are also well acquainted. Perhaps we do not feel the necessity of looking about for hay substitutes this year as we did the last two seasons. Yet barns were thoroughly empty this spring, every spear of hay and straw being used up. It will take this year's enormous hay crop to fill up again, and if we have a little surplus for another year, which again may be a poor hay year, it will do no harm. Besides, farmers can often make more money, and more easily, from hay than from the average grain crop. Good hay usually sells for more than its feeding value; and it will be well to grow and save other fodder materials for use and put the timothy into the market. I will say nothing of corn, silage and all such things, but refer once more to my favorite crops—oats and peas, and barley and peas. The bulletin says on this subject: "Ranking next to corn as a forage crop, and a close second, comes oats and peas. In the two years in which we have been conducting experiments in the production of forage, this combination has proven itself worthy of a place on every farm where stock is kept. It is valuable either for pasture, for cutting as a soiling crop, or when allowed to mature it may be cured for hay, making a most valuable article. When planted in succession of about two weeks, the first planting being as early in the spring as conditions will permit, a succession of highly nutritious forage is produced which is greatly relished by stock. If a more general use were made of oats and peas for summer feeding it would greatly decrease the expense of the production of milk and the cost of maintaining cattle, and economize land very materially. A highly nutritious forage would be obtained, rich in protein and furnishing nearly a balanced ration for milk-cows. A large amount can be produced to the acre, and it may be grown from early spring to late fall. A slight freeze does not affect it, and it may be sown in the spring before frosts are over, and the late forage frequently remains in good condition until December. The oats and peas at this station sown August 1, 1896, were in good condition for feeding until a severe freeze on the night of December 2d cut them down. For late forage, however, barley and peas are recommended instead of oats and peas. For sowing any time after July 1st substitute barley for oats. The reason for this is that in late summer barley makes more rapid growth, is less likely to attacks of rust and other fungous diseases than are oats."

Just at present I am giving to my cows, in addition to their pasture, a generous feed, night and morning, of freshly cut barley and peas, and the results in milk are very satisfactory. T. GREINER.

SALIENT FARM NOTES.

Fifty-two days ago I gathered my first meal of strawberries—all my family could use for dessert. To-day I finished the raspberries. For fifty-two days we have had strawberries and raspberries, all we could eat three times a day. The strawberries were picked from the vines just before meal-time, and came on the table bright, plump and possessing every atom of that fresh, delicious bouquet which makes this fruit so luscious when just gathered. The raspberries were picked early in the morning, as they are quite as good after being gathered a few hours as when fresh. When one comes in hot and tired, a heaping dish of fresh berries on the table is something to make him smile. Every farmer should be thus blessed, and he can be if he will. He has the land and the implements for cultivating, plants can be obtained for a very small sum, and all that is needed is a little well-directed energy—a very little work at just the right time.

* * *

I must tell my farmer friends how I am growing raspberries. I have a fence on the north and east sides of the garden that is made of two strips of eighteen-inch woven wire, with two four-inch boards between these strips, and a barbed wire at the top. It is a sort of "scrap-iron" fence, but it excludes the chickens and other stock, the barbed wire at the top preventing stock from breaking it down. The east fence is along the highway, and is useful only to keep stock that is being driven along the road and any stray animal from entering the garden.

Along these fences I set blackcap raspberry-plants, and as the canes grow I occasionally pass along the fence with a glove on one hand and poke the ends through the meshes in the woven fencing. This can be done any evening after supper, and takes but a few minutes' time. By the time winter stops growth I have a pretty good network of canes woven in among the wires, and the following season the fence is a solid wall of green, which in due time is fairly covered with berries.

When the last of the berries are gathered I take a common hand-sickle, and cut and pull out the old canes, and fasten the new ones, which at this time are most likely sprawling on the ground, to the wires. After this the occasional poking of the ends through the meshes is resumed.

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This is the easiest and most satisfactory method of growing a family supply of blackcap raspberries I ever tried. There is no breaking of the canes by storms, they are all gathered together in a narrow space, and the berries are very easily picked. If they cannot well be grown along the garden fences, I would put one up for them. Set good posts eight feet apart, nail a fence-board along them half way between the top and ground to hold them stiff and prevent the wire from drawing them together, then put on the woven wire, a single forty-eight-inch width, or two twenty-four-inch widths, one above and one below the fence-board. I prefer to use two twenty-four-inch strips, because they are more easily handled and put up than the wide one. Set the plants four feet apart along this fence, and give them a good mulching of manure every spring, and they will yield immense crops as long as the fence stands, even if the posts are cedar.

* * *

People still continue to write me asking whether I have yet found a thoroughly good garden-cultivator. I am glad to say that I have found one that pleases me first-rate. It is made by Davet Bros., North Madison, Ohio, and it will, I understand, at the proper season, be duly advertised in FARM AND FIRESIDE. All it lacks at present is a pair of rakes, and these will be, so the makers inform me, provided soon.

* * *

"A little farm well tilled" is what every young man who aspires to be a farmer should strive for. How much more independent is the man who actually owns ten, twenty, forty or eighty acres than he who holds hundreds, and pays a high rent on them in the form of interest on a mortgage.

"Better be the owner of five acres than the renter of a thousand," said an old farmer who began with nothing, and now owns three hundred and twenty acres of as fine land as the sun shines on. "Buy ten acres as a nucleus, and add to it as you can, always paying cash for what you buy," he continued. "Don't spend your money for tools and implements you don't need. Buy good ones when you buy, and take the right sort of care of them, and they will last as long as you do. I have a wagon I bought thirty years ago, and it will carry a ton of coal from town now. I have several tools and implements I bought fifteen and twenty years ago that are almost as good now as when new. Many a farmer has bankrupted himself buying implements to replace those gone to rack and ruin through simple lack of care."

* * *

Haying was finished yesterday on a small farm near me, and not a tool used in caring for the crop can be seen. Every one is packed away in a dry shed. They bid fair to last the owner as long as he lives. His farm is small, but it is paid for, and aside from taxes every cent he makes is his own. On a large farm not far from the other haying was finished nearly a week ago. It was done with a rush by a large force of men. In the yard, exposed to sun and rain, stands a two-horse rake, a tedder and a big mower, besides two wagons with hay-racks on. The mower and rake are nearly new. Under a tree near the barn stands the wreck of a rake only six years old. This man is paying nearly three dollars an acre interest on a mortgage. Where are your haying-tools, plows, harrows and corn-cultivators? Don't leave them out to go to ruin, and then complain that times are hard.

FRED GRUNDY.

Our Farm.

FARM THEORY AND PRACTICE.

MIDSUMMER VACATIONS.—Quite possibly some reader may say that a better heading for this article would be "A Farmer's Theory and Practice," as its purpose in part is to get away from the farm temporarily. It is with hesitation that I shall say what I do, but with the conviction that it is true, and should be said. Many of us farmers are permitting farm life to remain too much of a grind for our families and ourselves, and in such cases the effects are far from wholesome upon both parents and children. Hard work is good for every one physically able to perform it, but unceasing toil and care, with some fret and worry, harms any one physically and mentally. The last few years have been hard ones upon farmers from a financial point of view, and hard work and economy have ceased to be matters of choice in many households, and have become an imperative necessity that robs them of all their pleasure. We do not like to be driven. The result too generally seen is some loss of joyousness and freedom from care that should mark every life. There is a daily grind, and a feeling that pleasure-seeking and rest are beyond our reach. This is not true, I dare say, in a majority of farm homes, but on every side are households that are letting life become one continuous care. To such people my suggestion of a vacation will seem preposterous.

NO COSTLY TRIPS NEEDED.—Vacations mean rest, freedom from usual duties. They may be taken at home or near home. The thing needed is to get out of the rut and away from the daily round of thinking and working. On most farms plans may be made for ten days or two weeks of conscientious idleness on the part of every one, excepting a little absolutely necessary work. When congenial families plan such vacations at the same time, camping out, with simple diet, picnics, short trips and other pleasures not costly may be combined to refresh every one, and break up the monotony of ordinary life. Such diversion is the right of the boys and girls on the farms, and the duty of the older members of the family, who are growing old too fast. August heat invites us to break up the routine of hard labor for a short time, and demonstrate to young and old that the Lord has nothing against one because he makes a farmer of him, and that joy, rest and honest fun need not be monopolized alone by those who live in town. The midsummer vacation belongs to country folk as well as those in town.

SUMMER CONVENIENCES.—The Fourth-of-July orators tell us that no one lives more like a king than the farmer, but is this true? He may have fresher and better fruit and vegetables upon his table, and no one fears that the farmer will lack for good, wholesome food, but that is only a small part of desirable comfort. In respect to modern conveniences that go to make life pleasant thousands of farm homes are lacking in those things that are within their reach. Costly luxuries are beyond the reach of the mass of us, and with them I have no experience. Woman's comfort in the home during midsummer days should receive all possible consideration. There should be a cool kitchen, and that means one well ventilated and shaded by trees. Those old-fashioned makes of stoves that throw much more heat outside themselves than they do into the oven should be abandoned. In the interest of economy alone, for the saving of fuel, many of the old stoves in farm homes should be abandoned, and good ranges substituted. Modern ones use comparatively little fuel, and apply the heat to the roasting of the meat instead of the roasting of the cook. Then there is the gasoline or best oil stove. Such a stove saves the energies of the one doing the cooking, saving time, labor and temper. Most farmers can provide ice at little cost, and a moderate amount of it should be regarded as a necessity. In dozens of ways should we study to lighten the burdens of midsummer and get our pay for living as we go along. Pay-day on earth comes every day, and if one fails to draw his due at the time, he need not present his account at a

future date. Farm life pays big in comfort, if we will only take it. Our country boys and girls must have this truth demonstrated for them by their elders, or they will continue to drift cityward to find too late that they were under a delusion, and made a serious mistake when they got into the unfeeling and jostling crowd.

DISTINCTIVE DRESS.—If farmers are ever relegated to the rear and placed in a class by themselves in popular estimation it will be their own fault. The tendency of farmers to indulge in distinctive habits of dress and manner when not engaged in their work is much to be deplored. It is all wrong, wholly so, and we lose by such indulgence. One should dress according to the character of his work when engaged in work, but at other times there is no reason why rough and soiled clothing should announce our occupation for us. Carelessness in personal appearance grows upon many in the country, and the boys and girls notice this, and want to get away from it. Some reader may be saying that is a minor matter, but it is not. Our business, our political and social influence for what is good and just, is harmed by the cultivation of distinctive traits in manner and dress when we are away from our work and meeting with the world in pleasures or business. Costly clothing is never necessary, but a bath, shave and neat, clean dress brace a man up for winning when he goes out among his fellows. The business man knows this well, and profits by it. A multitude of farmers do likewise, but I fear that there is an even greater multitude that do not, and for one farmer I protest earnestly against anything that prevents any American farmer from helping to hold back that evil day when we farmers will be classed by ourselves in public estimate as merely so many toilers wholly immersed in our daily work, while others dominate public sentiment and create the conditions under which we labor and live.

DAVID.

THE FARM AND LIVE STOCK.

Grain-growers on the farms throughout the country during the past two seasons have considered themselves in distress. There has been great overproduction of corn and oats. The selling value of such grain has been low, far beyond proportion to many other articles the farmer must buy. The tenant, after paying his cash rent, has hardly been left a scanty living. In some cases, in fact, the rent-money more than exhausted the returns from sale of the grain. One good result of such conditions is the change in practice of cash renters to that policy of giving a part of the grain. The excessive high cash rent was due often to the fact that there was too much competition among renters in bidding for good grain-land. Too often the tenant who was paying all he could afford to pay had a rival who wished to oust him, and to this end offered an unduly high rate of cash an acre for desirable premises. Landlords have also learned that a tenant proposing to pay an unusually high rate for ground is not, as a rule, as desirable as one who makes more conservative propositions.

The great majority of farms should be devoted in part to growing three or more varieties of live stock—poultry, swine or sheep and horses; and one or more cows for dairying to a greater or less extent should be found on every farm. As far as possible the live stock should make their growth from grazing and hay or other provender. Grain will be necessary more or less in winter for much of the stock and throughout the year for the very young things. It is advisable, therefore, that a larger area of the farm be devoted to the pasturage, meadow and small grain, and fewer acres than in the past should be given to corn. By rotation of crops, so that no more than two successive corn crops are grown on the same field, the yield to the acre will ordinarily be increased fully one third. This, it will be observed, is nearly equivalent to three ordinary crops of corn in two years. The same ground withheld from corn on the third year under skilful tillage and management should produce an extra good yield of some other grain or grass.

The variety of grain that may be grown to advantage should be carefully considered. Improvements in certain grains, too, are to be noted. Barley in former years has been objectionable where stock is kept on the farm, because of the dis-

agreeable beards. This objection is now largely obviated in the new beardless grain. Later still has appeared the hull-less barley, which may be threshed out as clean as wheat or rye. With such a number of kinds of grain to use the risk of having a large field of oats to fall down on rich ground by its own weight and damage before maturity may be obviated. Many stockmen consider the beardless barley a first-class substitute for oats. The strength of straw and the adaptation of certain grains to rich ground is of moment in considering the worth of various grains. The present conditions of great overproduction on two leading food grains for live stock should lead every intelligent stockman into the practice of growing a much wider variety, for several reasons, as well as the one of low value. The season's work may be managed with less help where three or four kinds of grain are to be harvested at different times, instead of one kind which may all be required to be harvested on the same day. The live stock, too, will appreciate a change in their rations, and it will not only be more healthful for them, but they will make better gains in growth and weight.

Special regard must be had for the by-products of the various grains. A part ration of straw goes well with rich clover at any time during the winter. Clear, bright, dry straw is also a help to grazing animals in midsummer, often preventing bloating when pasturage is unduly rich and tending to form an unusual amount of gas internally.

As a rule, during the past two years the farmers who were able to feed their grain to live stock have received far greater returns than where they have depended on selling the grain to feeders or the grain-shipper. The farmer who fattens a half dozen bullocks or a score of porkers is finding employment for some of his own spare time, as well as increasing the profit on the food consumed in this way.

The more one can equalize his labor throughout the year, and by this plan use a greater number of acres for tillage and grazing, the better is his prospect of deriving better revenue for his season's income. It is ordinarily wise in buying a farm to procure, if possible, a tract of land of which at least three fourths of it is of the best quality for tillage. If the other fourth is rolling and adapted mainly for only meadow and pasture, it will be found at times as profitable where one keeps stock continually as though the entire area should be of the highest quality. It is a fact that on some of the new lands of the far West and Southwest of late the stockmen have made more money in proportion to their investment on the so-called desert wastes than have the stock-growers of the richer and more fertile plains of the central West. M. A. R.

MY IRRIGATION PLANT.

Every gardener appreciates the value of having water available for irrigating the garden at any time. If one depends on the usual rainfall, the best results will not always be obtained, for though he supplies all the plant-food needed, yet without water it remains insoluble in the soil. For several years a drought in June had shortened my crop of strawberries about one half what it should have been, and I began to consider the subject of irrigation. My truck-farm has a large brook running through it, which divides it into two nearly equal parts. The bed of the brook is from four to eight feet below the surface of the garden. How to elevate this water so as to be able to use it for irrigating purposes was the question for me. A windmill was too uncertain, an engine too expensive. I finally decided that I could elevate the water the most economically with a hydraulic ram. One of the largest rams, with a fall in the drive-pipe of about six feet, was placed in the brook. Near the brook on the highest bank a large tank was built of pine planks, and at a height sufficient to carry the water over the whole garden. From this tank iron pipes were laid in different directions over the surface of the ground. At about every third end was placed a T coupling in which were iron plugs which could be unscrewed and a hose attached at any place where I wanted to use the water. I let the tank fill with water during the night, and then toward night the next day distributed over the garden, and it may be applied with a sprayer or poured on in a stream, as desired. To prevent the ground baking with surface irrigation, and

to economize in the use of water, I sometimes place a mulch of manure between the rows of plants.

One object I had in view when I built the water-tank was to dissolve fertilizers in the water and feed them to the plants through the pipes. So far I have not had time to make many experiments with this plan, but one with poultry manure gave good results. To prevent the manure clogging the pipes it should be put into loosely made sacks, or put into a box made of slats close enough to hold the manure and still let the water in to carry out the food materials. I think I see great possibilities in using the tank for applying chemical fertilizers in solution. The plan I have in mind is to furnish the soil with potash and phosphoric acid in the form of ashes, muriate of potash and superphosphates; then having dissolved nitrate of soda in the water, feed it to the plants as they need it. If water for irrigation is taken from a tank, so as to expose a large surface of water to the sun to warm it, it does away with the objection against irrigating from wells, that the water is too cold to apply directly to the plants.

I have found it a great convenience to have water at hand to use when transplanting. I was formerly obliged to delay this work because of dry weather, but now, with plenty of water for wetting the ground, I am not obliged to wait for a rainy day, but can do the transplanting at any time when ready. If, after having prepared the land and marked it for plants, it is dry, a hose is attached to the pipe and a few rows are thoroughly wetted. The plants are then set, and a little dry soil drawn around them to keep the ground from baking. If dry weather continues, they are watered again in a day or two. By this method I never fail to make nearly all the plants live even in the driest weather. My experiments in irrigating strawberries are most satisfactory. I commence to irrigate them as soon as they begin to blossom, putting some fertilizer in the water a day or two before. The color of the foliage was immediately changed to a dark green, and a large growth followed both of leaf and berry. The iron pipes are laid over the bed about one hundred feet apart, and I sometimes apply it with a revolving sprinkler attached to the hose when only water is used. If I am applying liquid fertilizers that may injure the foliage, I lay the end of the hose on the ground, and run the water between the rows. In irrigating celery the water is started at the upper end of the row, and after the water has run as far as it will, more hose is added to carry it further along, irrigating every alternate row; then going over the field again, taking the other rows. With irrigation I can grow more than twice as much celery on the same ground, and it always makes a good growth. W. H. JENKINS.

Delaware county, N. Y.

A WEED-EXTERMINATOR.

Sheep are one of the best weed-exterminators on a farm. A few sheep turned into a field where foul stuff is growing in the fence-corners and around stone piles will soon have it all cleared away.

They seem to enjoy standing on their hind legs to reach up into the top of some bush to give it a good browsing. I would not dispose of all my sheep on this account if wool were worthless, although I am in hopes of seeing wool reach its former price in a couple of years.

Sheep, in order to produce a heavy growth of wool, and at the same time raise a lamb, must have special care. Some farmers seem to think that sheep will live on any kind of pasture at any time of year without any water to drink.

Sheep cared for in this way are a loss to any one, for the wool is of inferior quality, and will not sell for as much as the wool from well fed and cared-for flocks.

There has been a vast change in our flocks of to-day and twenty-five years ago. At that time a sheep was all right if it had a strip of wool on its back. The up-to-date sheep has wool where there is sheep.

Sheep are good property once more, and the farmer who sold out will not have a better opportunity to replace his flock at a small cost than at the present time. There has been an enormous decrease in sheep in the United States during the past few years. This in time will raise the price of both mutton and wool, so one cannot go far wrong in investing money in sheep.

ELIAS F. BROWN.

Our Farm.

MODERN SCIENTIFIC MAGIC AS APPLIED TO BUTTER-MAKING.

AT a recent agricultural fair in western Massachusetts some choice Jersey cows were milked at 10 o'clock A. M. The milk was at once placed in a centrifugal separator—this particular one was small and adapted to private dairies—and in a few minutes the cream and milk were thoroughly separated; and the cream, being transferred to an excellent patent churn, was turned into butter in a short time, and then worked in a patent trough, the boast of which is that "human hands do not touch it." By twelve o'clock it was salted and done up in neat packages that had been carefully weighed, in paraffin-paper. The gentleman who was superintending the process kindly presented one half of the product to the matron of a near-by hospital where there is a training-school for nurses, and it was placed on their table; by one o'clock it had all vanished, and they could boast that they had eaten butter that three hours previously had been in the udder of the cow.

Now, you ask, was that butter good? Yes and no. The human system demands a certain amount of ologenous material—this it gets in such butter as the above; but the palate demands certain flavors, which the scientist calls sapid, but which the unlearned express by "it tastes good." This rapid-transit butter is tame and tasteless compared with the product of any well-conducted creameries or with intelligently managed private dairies. Where is the difference? In order to have a desirable flavor the cream before churning must undergo the "ripening" or "souring" process. In what does this "souring" or "ripening" process consist? Professor Conn, of Connecticut, who has studied the butter and cream production of that intelligent and thrifty state for now these six years, says: "The flavor, the aroma and the acid which are produced in the cream during its ripening, and which give the peculiar character to the butter made therefrom, are due to the growth of bacteria in the cream."

Milk when drawn from the cow has a multitude of microscopical forms of life in it, which have come, not from the milk-glands, but from the milk-ducts, into which they have made their way from the outside. Many of them are entirely harmless, and have nothing to do with the flavor of butter; but when the cream is left to "ripen," bacteria develop in it in almost incredible numbers, and it is found that the finest flavors are developed by the acid-forming species of bacteria; but not all acid forms are beneficial, and by a long series of careful experiments it is demonstrated that good flavors may be produced by bacteria which produce no acid. The story of these experiments, while conclusive, is too long and technical for this place; but the practical outcome of all is that now the most enlightened conductors of dairies and creameries "inoculate" their cream with a carefully selected species of rapidly developing bacteria, which "get ahead" of the original ones in the cream, and thus they control the flavor of butter so as to give "June butter the year round." The minute account of the different experiments by which these conclusions have been reached fill several large pamphlets, which can be obtained by addressing Professor Conn, at the Storrs Agricultural Station, Conn., and comprise the study of six large creameries, and of many animals kept in private stables for several consecutive months.

The first definite knowledge of good butter bacteria came from Denmark, which is easily first of all the world in butter production. It is in that country that schools for teaching dairying in all its branches were first established, and it is there that the famous dairy is conducted by an enterprising and intelligent woman, who supplies the butter to many of the royal tables of Europe. She has beautiful white-tiled floors and walls in the rooms where the work is done; her cows are washed and groomed before milking, and the men who do the work are compelled to a corresponding degree of cleanliness, though it is not related there, as it is of one New England "fancy" dairy, that the milkers have to bathe and part their hair in the middle before being allowed to sit down beside the cow. Her butter is packed in porcelain jars, and if we call a superior sort gilt-edged, hers can be called diamond-

edged. They have a term "loopful" in the bacteriological laboratory when they study milk. It is a drop the size of a large pinhead. In one loopful there have been counted 60,000 bacteria, in another 20,000, but in a very sparsely populated one only 250. Many people are incredulous when you tell them of these tremendous numbers, if they have no knowledge of the ingenious inventions by which they are counted. But when you show them a single hair from their own heads magnified to look like a telegraph-pole, they yield assent. Men have counted the red corpuscles in the human blood, and find that there are 5,000,000 in a single millimeter, and beside that the milk problem is comparatively simple.

Now, the next steps after learning that the flavor and aroma of butter are controllable is to cultivate the right kinds, or kind, of bacteria and inoculate the cream, and thus secure the right sort for the desired flavor, and to produce a uniform result and make sure that bacteria that might produce bad flavors shall be surely destroyed. The milk is first pasteurized; that is, the milk is heated to 158 degrees Fahrenheit—much below boiling heat—for fifteen minutes, and then allowed to cool. This destroys all the kinds of bacteria that do not have spores (seeds), and these do not affect the flavor or aroma (the character that affects the nose) of the butter. Dr. de Schweinitz, of Washington, D. C., lately said, in an address on bacteria up-to-date: "Fortunately or unfortunately the use of these germs has been patented, so that in the near future we may see branded upon particularly fine butter and cheese, 'Patented in 1893; amended, 1896; reissued, 1908, etc.'" But when he asks, "May we not expect soon a patented process for sterilizing breathing, eating and sleeping?" he misses the point. The thing that has been patented is the careful culture of a correct sort to produce a desirable flavor—the scrupulous isolation of it from all others, and the putting of it into hermetically sealed bottles by a man who holds himself responsible for failures.

Dr. Conn, in summing up, says: "It follows that the use of starters will commonly give rise to favorable results, even though the cream is largely impregnated with other species of bacteria before the inoculation with the artificial starter. This fact lies at the basis of the use of artificial starters either with or without pasteurization. To produce the desirable result it is necessary to have the starter contain a large abundance of some favorable species, which by its growth can both check the development of the ordinary cream bacteria, and can develop a proper flavor by itself."

It needs hardly be said that the cultivation and putting up for commercial use of the proper starters is a process of the utmost scientific delicacy.

It is just twenty years since Sir Joseph Lister studied, isolated and described the bacterium that produces the ordinary souring of milk, which was afterward named by Hueppe bacillus acidi lactici. Since then the entire science of bacteriology, which measures so large an arc on the isle of human knowledge, has been developed—a science that placed the practice of medicine upon a scientific basis, and rendered possible an intelligent system of agriculture and animal husbandry.

MRS. H. M. PLUNKETT.

UTAH SMALL FARMS.

The small farm is the mainstay of Utah and the power behind the throne of agricultural independence. There are twenty thousand farms in the state, averaging about twenty-five acres each, under actual cultivation by means of irrigation. Added to this area is a similar acreage of non-irrigated pasture and meadow lands. These farms yield (according to official statistics) over 3,000,000 bushels of wheat, half that amount of oats and potatoes and a proportionate production of other cereals every year. The small orchards and vineyards, of which every farm has more or less, yield about 630,000 bushels of fruits, and their products of cider, vinegar and molasses amount to 200,000 gallons yearly. To this may be added 4,000,000 pounds of butter, 850,000 pounds of cheese and 1,200,000 pounds of honey. The irrigated grass-fields produce 463,000 tons of alfalfa, while the unirrigated valleys yield 135,000 tons of wild hay every year. Over 40,000 tons of sugar-beets are grown and made into sugar annually.

Fifty years ago the present irrigated and productive valleys of Utah were immense deserts of aridity. By the aid of modern irrigation and the peculiar system of Mormon co-operation these deserts have been reclaimed and fertility restored to the native soil. Individual efforts would have failed in the conquest of aridity, and the claiming of large areas would certainly have defeated the successful colonization. The Mormon leaders very wisely prohibited their members from seeking mineral treasures until sufficient land was put under cultivation to produce enough food for every inhabitant. The people settled in small colonies, dividing the plots into lots of one and one fourth acres. On these city lots the houses and corrals were built, and perfect colonies were formed. The adjoining fields that could be irrigated were divided into ten and twenty acre tracts, while the unirrigated or meadow lands were similarly allotted. The town sites were home-steaded by the respective mayors, and the cultivated area was obtained by co-operative claimants, deeding each a portion after procuring title.

Very few of the farms are fenced, and only irrigation ditches mark the dividing lines between owners. The sheep and cattle are kept in the mountains during the summer season, and permitted to roam at large over the cultivated area during the winter. This eminent domain, the property of everybody, has about 2,500,000 sheep and over 450,000 cattle, horses, mules, swine and goats. The success of farming has been materially handicapped by mining sensations created in almost every section. This has caused the mortgaging of over ten per cent of the farms to get money to sink holes in the ground, with the expectation of the owners becoming millionaires. Again, the tendency of many speculative farmers branching out into larger schemes and neglecting the small farm has depreciated its value as a producer. Modern ideas of magnificent possessions destroy the small-farm sentiment, and the worry and trouble consequent upon inevitable failure create chronic growlers, resulting in political disturbances.

The co-operative methods inaugurated by Mormon colonists have contributed to the success of the small farm. Wilford Woodruff, president of the Mormon church, has lived upon a twenty-acre farm and supported a large family from its income during the past forty years. He could not have realized enough from that farm to pay the taxes had not several adjoining farmers co-operated in building irrigation canals and looking after the roaming cattle and sheep. One man guards not only his own growing crops and protects the irrigation supply, but assists his neighbors, because all have equal interests. The small farmers do not require so much of an investment for machinery, few hired hands are necessary, and the general expenses are light, because of the co-operative methods. An era of intensive soil culture is inaugurated where small farms are operated, and two blades of grass are grown where but one was grown before, because of the extra cultivation and application of proper fertilizing agencies. Irrigation makes the small farm profitable, and many lessons may be learned from the system of small farms in Utah. JOEL SHOMAKER.

EXTRACTS FROM CORRESPONDENCE.

FROM VIRGINIA.—Perhaps some of your readers would like to hear from one in the "sunny South" who was raised in Ohio. We have a fine climate here all the year round, and can raise nearly everything. Poultry does well here, and we get good prices—from twenty to forty cents a pound each for early chicks weighing one pound each. What we need most is more northern people to make homes here and improve the country. Licking, Va. J. T. L.

FROM OKLAHOMA.—Logan county is a fine fruit, grain and stock raising country. The wheat crop is the largest ever harvested in the territory. It is estimated at 30,000,000 bushels. The yield runs from twenty to fifty bushels to the acre. The oats crop is also immense. Early peaches, apricots and plums are now on the market. Vegetables of all kinds have grown magnificently this year. There is a great deal of cotton raised in this county. Guthrie, the capital of the territory, is the county-seat of Logan county. It is a flourishing little city of about 10,000 inhabitants. E. R. A. West, Oklahoma.

FROM TENNESSEE.—Our wheat and clover crops are very good. Corn is doing well. Cotton is not very good on account of the cold, wet spring. There are many people here now from the North and Northwest looking for homes. One visitor from Nebraska says this is the grandest country he ever saw. Home-seekers are taking advantage of the cheap rates to the Tennessee centennial, at Nashville. I visited the exposition on Ohio day. At night it was the grandest affair I ever looked at. F. W. M. Murfreesboro, Tenn.

FROM OHIO.—Thousands of bushels of strawberries were shipped from this county (Lawrence) this year, and great quantities were sold at Huntington, W. Va., which is our nearest market. Early apples are fine, but late apples will not be a half crop. Peaches will probably be a half crop, but there are no pears and very few quinces. Grapes look well. Wheat is fine. Grass is also good, the best we have had for years. Corn looks well. Lawrence may be the banner strawberry county in the near future. Proctorville, Ohio. W. H.

FROM MINNESOTA.—I want to tell the readers of FARM AND FIRESIDE of the chances there are in this part of the West for dairying. If it is a good business in the eastern and middle states, where the land is worth from \$50 to \$100 an acre, why is it not here where land can be bought for from \$8 to \$15 an acre? There is plenty of grass for the cow. There is room in this vicinity for fifteen or twenty farms that can keep forty or fifty cows each. There is a creamery all ready for business standing idle for the want of cows and patrons to run it. There are only two farmers paying any attention to the creamery business, and they are doing well. Most of those who are here think they cannot do anything but raise wheat or flax, and pay no attention to the cows. There is a good chance here for men who are interested in butter-making. Come and see. I. C. B. Tintah, Traverse county, Minn.

FROM FLORIDA.—I came to this state about eight years ago, and engaged in farming and fruit-growing. I put out an orange grove the first year, and brought it to bearing in three years. The great freeze killed my grove to the ground in the winter of 1895. Since that time I have brought my grove back to bearing. About one half of my trees are now full of fruit. I have apples, peaches, pears; in fact, all kinds of fruit. I have farmed and made plenty to live on. Crops have never failed since I have been in Florida, if properly taken care of. I have corn this year that will yield forty bushels to the acre. Vegetables can be raised for northern markets, and paying prices realized. I have out a crop of onions that will make 400 bushels to the acre. My cotton looks fine. Tobacco does well and brings ready cash. Grapes pay well made into wine. About \$400 an acre can be realized. Wild lands can be had for from \$5 to \$10 an acre, within a mile from the depot, and cheaper farther away. A. R. C. Welston, Marion county, Florida.

FROM VIRGINIA.—The Buckingham branch of the Chesapeake & Ohio railroad runs twenty-one miles up in the county from Bromoblast on the main line. At Arvonla the finest roofing-slate in the world is taken out. There are several large quarries. This slate is used for nearly every purpose now—roofing, mantels, table-tops, tombstones and many other things. A slate tombstone is said to outlast that of any other kind, marble and granite not excepted. Historic Appomattox county joins Buckingham on the west. A very fine wheat crop has been harvested in this section this year. All crops are looking well. This is one of the best farming sections in Virginia for tobacco and all the grain crops. One man sowed one and one half bushels of wheat last fall and threshed fifty from it this fall. Land, unimproved, is very cheap here, and improved land not very high. We have good markets, cheap transportation and good roads. There has been a marked improvement in the roads during the last year. Your paper is read and appreciated here more than any other of its kind that comes into the county. W. C. H. Wealthia, Buckingham county, Va.

Hard Lot in Life

But She Finally Found Relief from Her Sufferings.

"I was troubled with my stomach and suffered severe pain after eating. I began to think my lot in life was very hard. One day I concluded I would make one more trial and I sent for a bottle of Hood's Sarsaparilla and a box of Hood's Pills. The result was that I have had not one bad spell since I began taking these medicines. I can eat all kinds of food without unpleasant consequences." Mrs. G. W. Wynn, Sybene, Ohio.

Hood's Sarsaparilla

Is sold by druggists, \$1; six for \$5. Prepared only by C. I. Hood & Co., Lowell, Mass.

Hood's Pills cure Liver ills; easy to take, easy to operate. 25c.

Our Farm.

NOTES FROM GARDEN AND FIELD.

GROWING AND PICKLING CUCUMBERS.—Until some four or five years ago pickles were quite an important farm crop in this vicinity, almost every farmer planting an acre or two of cucumbers, and either selling the pickles directly from the field or putting them down in big vats in brine, and then selling them by the barrel later on during winter or spring to Buffalo merchants or fancy-pickle makers. Then the markets became overstocked, and I think some of our farmers have yet vats and tanks full of old pickles that they have in vain tried to sell at an acceptable price for some years. Now there are few people around here who grow cucumbers for the pickle trade. And yet from the many inquiries that I have recently received concerning the best ways of putting down pickles, I conclude that in some other localities there is still a demand for pickles and a chance to make pickle-growing pay. I am sure they can be grown with considerable profit even at ten or twelve cents a hundred. Here a crop of one hundred thousand was considered a good yield; still, under high culture, that is, by the selection of best adapted soils and the free use of fertilizers or manures, more than twice that number can be easily produced to the acre, and at that rate an acre—at ten cents a hundred—would bring the respectable amount of two hundred dollars. Some years ago twenty cents a hundred was often secured.

HOW TO GROW PICKLES.—Before we can think of pickling cucumbers we must grow them, and that is not always an easy matter, especially where the blight (leaf-blight, bacterial blight) is a sure annual visitor. This disease often (perhaps usually, here and in many other localities) sweeps through the patches, first taking a plant here and there, and continuing its attacks until every plant in the patch, long before the end of the season, has succumbed. The best way is to plant on strictly new soil, preferably some sandy or mucky loam, rather moist than otherwise, but thoroughly drained. Persistent spraying with Bordeaux mixture seems to have good effect in keeping foliage healthy, and if Paris green is added to it, in keeping the beetles in check. Good cultivation and repeated hoeing are absolutely necessary, but the vines in these operations, as well as in picking, should be disturbed as little as possible. It is the large number of marketable pickles which is wanted rather than large size of the individual pickle. The size most in demand is three inches in length. The more promptly we pick the three-inch size, the more pickles the area will furnish, and therefore the greater the returns and profits. An experienced grower says in "Michigan Farmer":

"The larger the number grown on a given territory the more profit, hence they should be picked very close. The bulk of the crop should be of the smallest or medium size. Those overlooked can be utilized, but the fewer the better, and none must be allowed to mature. Care must be taken to disturb the vines as little as possible; in this regard children with their bare feet are preferable to grown people, and our experience leads us to believe that children can, quite as easily as grown-ups, be taught to pick them clean."

PICKLING CUCUMBERS.—Rose Seelye Miller gives the following good directions (New York "Tribune"):

"In raising cucumbers for pickling the small varieties should be chosen, and if larger kinds are used they must be picked when small. The smaller the cucumbers, the more they are worth a barrel. Those over four inches long will not bring near as good a price as those much smaller. Cut the cucumbers from the vines with sharp shears, and have a little stem on each cucumber; don't pull the vines or break them, and don't tread on them. Do not pick early in the day. There must be no mud upon the cucumbers or vines, as this will cause rust and stop the bearing. Pack by hand in small barrels or kegs made on purpose for this work. Do not throw the cucumbers in haphazard. Pack well, and cover with a strong brine which has been heated to nearly the boiling-

point. The cucumbers must be entirely covered with this brine. Some put in alum, to make the cucumbers hard and green, while other packers declare that the clear, strong brine is better and more successful. Of course, no cucumbers must be allowed to mature on the vines. If some are overlooked and get too big for packing and shipping, they should be picked off, and perhaps used on the home table or disposed of in a near-by market for table use."

Farmers around here used large casks or vats, some of them holding one hundred barrels apiece. The freshly gathered pickles were washed, and then emptied into these receptacles. The brine, under which they are held by means of a weighted cover, is strong enough to float a fresh egg. It takes about a bushel of salt to ten five-peck crates of cucumbers. Such a crate holds from five hundred to eight hundred pickles, the number varying in accordance with the size of the cucumbers.

FURTHER DETAILS.—From an approved recipe I also quote the following:

"The cucumbers are picked every other day in the morning as soon as the dew is off, and sorted into three sizes from two to seven inches in length, each size packed by itself. If possible, the packing is done in the afternoon of the day they are picked. Barrels may be used; when full, the cucumbers are covered with brine of sufficient strength to float a potato. No more salt is to be added. After standing three or four days to settle, the scum should be removed, and each barrel refilled from other barrels containing cucumbers of the same size which had been in brine of like strength. The barrels when headed up and marked are ready for shipment. A forty-gallon barrel will hold from five to six thousand of the smallest size, and from ten to fifteen hundred of the largest. The cucumbers must be cut from the vines with a sharp knife, or better, scissors, leaving on each a bit of stem. Cucumbers put up in this brine will not shrivel, and need but little refreshing, but housewives must bear in mind that they will not keep through the second summer without adding more salt."

The same authority recommends the following pickling process:

"Drain them from the brine, fill any receptacle two thirds full, pour boiling water over, and let remain twenty-four hours. If too salt (which will depend upon the size), pour off the water, stir thoroughly from the bottom, that they may freshen evenly, again cover with boiling water. After twelve hours drain, and cover with boiling weak vinegar; three days later drain, and cover with cold vinegar of full strength, sweetened and spiced or not—to suit the taste."

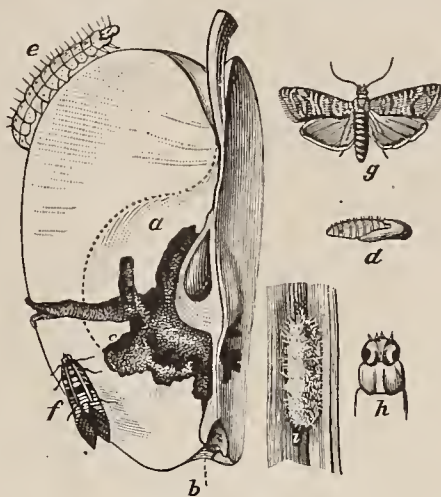
I will say, however, that I do not know of any grower around here who ever sold his pickles in any other shape except just put up in brine. I am not aware that there is a wholesale market for ready-made pickles; that is, for pickles in vinegar. And even if there were such a market, the average grower, lacking the skill and experience necessary for putting up pickles in vinegar or in any fancy style, would do far better to sell his pickles in the brine.

SOME NEW FRUITS.—One of my friends (who hails from the state of wooden nutmegs) asks me about the merits of the Japan mayberry, the tree-strawberry, the tree-blackberry, the muskberry and the wineberry. Some of these fruits are too new to have definite sentence pronounced upon them. I have known the tree-blackberry under its earlier name, "Topsy," and can say that, so far as its tree feature is concerned, you will find in it another wooden nutmeg. Topsy is of strong growth, immoderately thorny, bearing a fair crop of good-sized berries, but on the whole without especial merit. The Japan wineberry has here proved worthless as a fruit, and somewhat delicate as an ornamental plant. If we don't have it on the grounds we will not lose much. With the muskberry I have no personal acquaintance, and do not expect much from it. The tree-strawberry, or strawberry-raspberry, is said to be very weedy and hard to get rid of, while the fruit has not found an excessive amount of admiration. The Golden mayberry is reported to be tender. I have the two last-named berries on the place, and can tell more about them in a year or two. In the meantime I have screwed down my anticipations to the lowest notch.

T. GREINER.

ORCHARD AND SMALL FRUITS.
CONDUCTED BY SAMUEL B. GREEN.

Saw-flies—Coddling-moth—Apple-maggot.—A. S., Ely, Iowa. The insects sent are saw-flies, the larvae of which feed on grass, etc. Similar insects eat the leaves of willows and other trees, but this one is not injurious. —The coddling-moth is a small brown night-flying moth. It appears on the wing about the time of the opening of the apple-blossoms, when the female deposits her tiny yellow eggs singly in the calyx, or eye, of the



THE CODDLING-MOTH.

a, burrow; b, point at which worm entered; c, full-grown worm; d, pupa; e, moth with folded wings; f, moth with expanded wings; g, head and first division of body, enlarged; h, cocoon which incloses pupa. (Riley.)

apple just as it is forming. In about a week the eggs hatch, and the worm eats its way to the core. In three or four weeks from the time of hatching the early brood of larvae are full grown and the apples they occupy fall to the ground, sometimes with the worm in them, but more commonly after the worm has escaped. The larvae spin their cocoons under the rough bark of the trees, or in other sheltered places, from which the moths emerge in about two weeks. These moths lay their eggs the latter part of July, generally in the later apples. The larvae mature in autumn and early winter. They may leave the apples before they are gathered, or not until they are stored. In either case they hide in sheltered places. A favorite place for the larva to spin its cocoon is under the boops or between the staves of fruit-barrels. It emerges as a moth in the spring. **REMEDIES.**—If hands of cloth or paper are put around the trees, the cocoons will be spun under them, when they may be destroyed. A good remedy also is to spray the trees as soon as the flower has fallen, with Paris green and water, at the rate of one pound of the poison to one hundred and twenty-five gallons of water. At this time the eye of the apple is upward and catches some of the poison and the young worms are destroyed by it. The apple-maggot is the larva of a fly, while the coddling-moth is a true moth.

Blackberry and Cherry Wine—Licorice.—P. G. F., Wilsey, Kan., writes: "Give method of making a first-class grade of blackberry wine—something which will keep and improve with age. Also tell how to make cherry wine with same qualifications. The cherries to be used are the common black cherry.—I would like to experiment with some licorice-plants. Please state where to get seeds or slips of same."

REPLY:—To one gallon of mashed blackberries add one quart of boiling water. Let it stand for twenty-four hours, or nearly as long; then strain through a coarse bag, add three quarts of water and two pounds of brown sugar to each gallon of the mixture, making equal quantities of water and juice. Put in clean demijohns, stone jugs or tight kegs; close partially in a cool place; if left in a warm place and entirely open it will sour; if stopped entirely it will burst the vessel; leave the cork in loosely. Let it stand until fermentation ceases, which will be about October. Then bottle it and keep in a cool place. The same treatment will make a good cherry wine.—Licorice may be bought of J. M. Thorburn, 15 John St., New York City, at twenty cents per ounce.

Probably Leaf-rust.—W. B. N., Oran, Ohio, writes: "I have some young maple-trees that were set out this spring. Their leaves are full of little holes, turn brown, dry up and fall off. They were set out the first of April. I transplanted them immediately without the roots becoming the least dry, in black top soil mixed with clay. The trees have had plenty of rain."

REPLY:—I wish you had sent me a sample of the injured leaves, so I could have something to go by, but I think the injury is caused by a leaf-rust that is occasionally very injurious. It is most injurious on trees that are weakened by some adverse circumstances. In your case the tree was undoubtedly injured by transplanting. If they had been sprayed with the Bordeaux mixture, recipe for which has been so often given in FARM AND FIRESIDE, it would have been prevented; but this would very likely have been more trouble than you would probably have undertaken. If the trees survive this year it probably will not be seriously affected next season. Give them plenty of water and manure and pick off the diseased leaves.

Budding the Peach-tree—Leaf-curl—Blackberry-rust—Anti-rabbit Wash for Trees.—J. E. S., Odessa, Mo. Peach-trees should be budded in August in your section.—Your query about leaf-curl was answered in a recent number of FARM AND FIRESIDE.—The cause of blackberry-rust is a minute fungous plant that produces the orange-colored spores on the under side of the leaves. There is no remedy. The only good treatment consists in pulling and burning the infected plants. Some kinds are more subject to it than others.—You could put Paris green in the blood, or use it in whitewash or paint on the trees at the rate of one ounce of Paris green to each quart of paint or whitewash, without danger. A mixture of lime-water and cow manure, made strong, makes a very good anti-rabbit wash.

Budding.—G. C. K., Sidney, Ohio. 1. The time to bud apples, pears, cherries, plums and peaches in your section is about the middle of August, but the work may be done earlier or later, according to the weather or other conditions. The rule is to do it at any time when the buds are large enough to handle and when the bark on the stock will peel easily. 2. The buds should not start until the following year. 3. The wrap should be loosened as soon as it begins to cut into the stock, and not before, and may be taken off entirely when the bud has fairly united with the stock. In what is called June budding the buds start at once into growth, but they make a weak growth the first season.

Gooseberry-mildew.—J. H. M., Horse Shoe Bend, Idaho. Spray the leaves and fruit with a solution of one ounce liver of sulphur (sulphid of potassium) to two gallons of water at intervals of two weeks, commencing before the flowers are gone. Buds that are closely shut in so that they do not have a free circulation of air around them are most likely to mildew, but some varieties are much more liable to mildew than others.

Borers.—W. H. G., Rock Falls, O. T. The eggs are laid by a beetle probably in the early part of July in your section. A good preventive is to paint the trunks of the trees with soft soap reduced to the consistency of paint by the addition of strong lye. This should be kept on during July. The trees should be looked over each autumn, and if borers have got in they should be dug out with a knife.



A mother is always ready to sacrifice herself for her baby. But nature does not often call for any such sacrifice. On the contrary nature calls upon every mother to carefully protect herself and in that way to protect her baby.

During the critical period when a woman is looking forward to motherhood, the best protection she can give to the tender little life which is dependent upon her own, is to fortify herself with the health-bringing "Favorite Prescription" prepared by Dr. R. V. Pierce, chief consulting physician to the Invalids' Hotel and Surgical Institute, of Buffalo, N. Y., and sold by all dealers in medicines.

All the dangers of motherhood and most of its pains and discomforts are entirely banished by the use of this rare "Prescription." It gives elastic strength and true healthful vitality to the special organs and nerve-centres involved in motherhood. This healthful condition is transmitted to the baby both by the improved quality of the mother's secreted nourishment and by the child's increased constitutional vigor.

It is a perfect health protector to them both. No other medicine was ever devised by an educated, scientific, physician for the express purpose of bringing health and strength to the special feminine organs. No other preparation ever accomplished this purpose so scientifically and effectually.

A more particular description of its remarkable properties with a full account of some surprising cures of female difficulties is given in one chapter of Dr. Pierce's great thousand-page illustrated book, "The People's Common Sense Medical Adviser," which is sent free paper-bound for the mere cost of mailing: 21 one-cent stamps; or, cloth-bound, for 31 stamps. Address the Doctor as above.

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Our Farm.

DIAMONDS IN THE ROUGH.

UNDER the above caption the first thing in order is the planting of a wild-flower bed. Out of season at present, to be sure; but we are looking ahead. Most tasks are the better performed by having some preparation beforehand. By way of this preparatory work we may observe the wild plants from time to time as we go hither and thither about our daily work, and when any choice specimen is seen, we can then and there mark the same by sticking down a little stake by the plant, or tying a strip of cloth onto it, or any other handy way. At some odd time we can also get the main wheel of some worn-out reaper and place it in position as frame for the flower-bed. Sink the rim about one third its width into the ground. Fill with rich soil to the depth of another third, and that will leave a third of the rim above all ground to hold the water in place when we want to irrigate. All this completed, we are ready to begin transplanting. This with most wild plants can be done any time when the ground is not too dry. As we have our bed arranged for irrigation, we can dampen the dirt if too dry, and then proceed. When the plants are all in place, saturate the bed with water, and keep moist until they are established. In case the old hen runs at large, and therefore is liable to get in her diabolical culture when we're off guard, a few slats or some wire netting will stand sponsor over our pets if placed over the top of the reaper-wheel.

This year I'm testing two new kinds of field-corn—the Iowa Silver-mine and the Prehistoric. The first is said to have yielded at the rate of two hundred and fifteen bushels an acre, and the second is reported to have been buried for centuries, having been grown by some ancient race. It is also claimed to catch a very firm hold in the ground—never blowing down except the stalk breaks. Dungan's White Prolific is the best kind I've tested as yet, but should some variety be found to excel Dungan's, then the new must be put at the head of the list and Dungan's moved down. Four new kinds of water-melons, also, are undergoing trial this season—Dixie, Duke Jones, Sweet Heart and Knuckley's Sweet. Seminole is the best I've yet found, but perhaps something better still might be obtained by patient research.

By the way, have all the FARM AND FIRESIDE readers an abundance of pie-plant, horse-radish and asparagus? Have they lots of strawberries, too? If not, they may, if they will but make the effort. Rich ground is the one thing needful for all four kinds. The strawberries are a good dentifrice, the pie-plant is a liver medicine, the horse-radish leaves are all right to stew with bacon as greens, and the asparagus is an excellent substitute for garden-peas.

Has any one of the FARM AND FIRESIDE circle figured out a good way to dispose of the American tramp? We need good country roads. How would it do for the government to take these knights of pedestrianism in hand, putting them under a skilful read-builder as overseer, and have our highways turnpiked? Give the tramps their food and clothes and twenty-five cents a day, and make them work. It seems to me that this would be much better than allowing them to tramp from house to house and get their victuals by begging, spending their time in idleness.

A voice of warning to farmers! There's a weed in our country known as English sorrel, Virginia sheep-sorrel or horse-sorrel, which is going to be the ruin of all our meadows and pastures if we don't come down on it with mighty stroke. It is all over some fields, and in spots over others. While in bloom it is of a brick-dust red in color. When once all over a field it can never be gotten rid of. But two ways are known to kill it, and they can't be well used on a large scale. Those plans are to put salt on it or to cover the ground with straw and smother the sorrel. When buying grass-seed to sow, be sure it is clear of sorrel-seed.

JEFFERSON D. CHEELY.

THE POULTRY YARD.

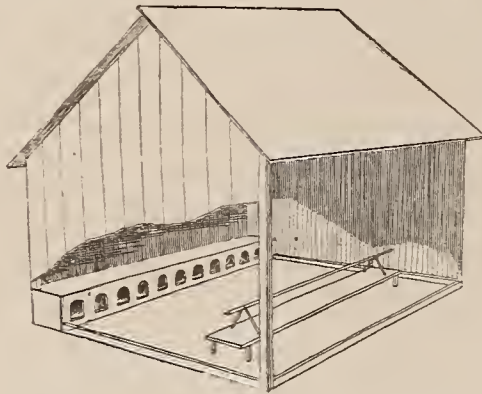
Conducted by P. H. Jacobs, Hammonton, New Jersey.

FORCING CHICKS RAPIDLY.

One of the results of brooding chicks in the brooder is that they feather very rapidly, and the pullets mature much sooner than when they are hatched under hens and run at large. In fact, young pullets raised in brooders have been known to begin laying before they were four months old, even when but large enough to be sent to market. This is due to the forcing process practised. Those who feed young chicks heavily overlook the fact that they are kept very warm in the brooder-house, and they do not require as heavy feeding as if exposed to the cold. Young chicks, also begin to feather as soon as they are two or three days old, which is weakening, but this is also due in many cases to the forcing process. Brahma and Cochon chicks do not feather so rapidly as some other kinds, but it is usually the case that quite a lot of the chicks perish from rapid feathering. There is no remedy to prevent this difficulty except to reduce the food and not feed oftener than three times a day, using meat and a little linseed-meal and a proportion of bulky food. It is never necessary to force young chicks before they are eight weeks old, as they will lose more weight than they will gain, and there will also be less liability of loss of chicks.

MOVABLE ROOST AND DROPPINGS-BOARD.

When the nests are under the droppings-board there is a greater liability of lice multiplying, as the heat accumulated in the nests from the bodies of the hens is conducive to their propagation. They go up to the roost and annoy the hens. The nests cannot be easily made movable when covered by the droppings-



board if the roost is also over the board. The illustration is a design of a movable roost placed over a droppings-board, the board having legs of any height desired to keep it off the floor. This arrangement permits of placing the roost and board at any desired location in the house, and it and the nests (which should also be movable) can be taken outside and cleaned at any time.

SELL EGGS AT HOME.

Farmers should never ship eggs until they have first endeavored to get better prices for them nearer home. If they would retail their eggs and seek customers a large sum would be added to the receipts from poultry. Fresh eggs are always salable, for every family must at times have them. It frequently happens, when eggs are scarce, that one farmer must buy them from another, and in every village and town will be found those who prefer to buy from the farmer than from the dealers.

CHARCOAL FOR FATTENING.

Experiments made with turkeys demonstrated that when charcoal was added to the food they gained more rapidly in weight than when it was omitted. This would imply that there was something in the charcoal which created fat, but it is doubtful if any portion of the charcoal is digested. The probability is that when fowls are being fattened they receive more food than should be allowed, a portion fermenting in the crop before it can be passed on to the gizzard. Fresh charcoal absorbs gases, and serves to correct acidity, and it is to this property of charcoal that its beneficial effects are due. Charcoal is eaten by hogs for the same purpose, and proves a valuable adjunct when they are fed heavily. In fattening poultry it is not necessary to feed every two or three hours, but rather to allow all the food the fowls can eat at one meal, three times a day

being a sufficient number of meals. It is the amount of food digested that causes the increase of weight, and it requires several hours for digestion to occur. Any food given that cannot be digested retards the gain of the fowl, and also increases the cost of production. Charcoal is an assistant to digestion, and not food of itself.

FOWLS IN CONFINEMENT.

If poultry confined in yards could be well managed, they would pay better than when given a range; but to give a small flock proper attention would cost too much labor. When one keeps a flock for pleasure the labor is bestowed without regard to cost, but on the farm the case is different. When birds are confined they learn vices. They begin to eat their eggs, and pull feathers from the breasts and bodies of one another. This is due to idleness. If idleness can be avoided, the fowls will not learn vices. Fowls in yards become pets, and they are fed by every member of the family. As the hens soon learn to recognize their friends, they run to the attendant upon the first sound of approaching footsteps, and the result is that they are given food frequently, because they are supposed to be hungry. Their crops are always full, they become lazy and fat, having nothing to do; then, like all other idle creatures, learn vices. There is no point more essential to learn in keeping fowls in yards than that of when not to feed. All know when to feed, but to have the courage to withhold food is the most important requisite in the management.

SHIPPING LIVE FOWLS IN SUMMER.

If large chicks could be obtained they would be eagerly purchased by consumers, but as such chicks are scarce at this season, the fat hens are most in demand, roosters not being worth the freight paid on them. It may be mentioned that while dressed fowls can be shipped to best advantage, there are many coops of live fowls sent to market at this season on which a loss may occur, as exposure, lack of food, close crowding in coops, etc., cause a large proportion to perish before reaching their destination. One of the greatest mistakes in shipping live poultry is that of mixing fat hens and roosters in the same coop. The hens cannot be assisted in bringing better prices by having males with them, while buyers will not buy in large lots and pay good prices for mixed stock. The roosters only take up room in the coops and assist in crowding the hens. If fowls are shipped, let them be "choice" in the market. If roosters must be sent, put them into a separate coop. It means a difference of several dollars on a coop of fowls if they are shipped properly. Dressed stock should also be assorted, and no fowls should be sent to market unless they are fat.

PREVENTING EGG-EATING.

If an egg is broken the hens will eat it, and it is by eggs being broken that the hens learn the vice, as they never eat eggs unless they first find one broken. The only way to prevent the hens from eating eggs after they once begin is to make a nest with a top, compelling the hen to walk in to reach the nest, and have the box raised ten inches from the floor, so that the hen cannot stand near the box to eat the eggs. When she goes on the nest she cannot do any harm, as she must come off and stand up to eat the eggs.

CROWDING THE BROODERS.

The capacity of brooders varies, but that fact does not deter those using them from crowding the chicks. If the incubator hatches a hundred chicks they must all go under the brooder. The brooder will prove successful with even more than that number when the chicks first arrive, and but little loss will occur, which deceives the operator; hence, when the chicks are a week old and begin to die, he ascribes his misfortunes to the food or to some mistake in management, simply because the small chicks were thrifty for a week, but he never thinks of the number of chicks in the brooder or of the fact that growth forces them to occupy more room every day. An extra brooder costs money, and the one on hand must do the work (as perhaps the maker of it claims many advantages in its favor), but the chicks continue to die. Only one or two are lost daily, but after a time the number of

chicks is reduced to the capacity of the brooder, the chicks begin to thrive, and he raises forty or fifty, which is just the number the brooder should have contained at the beginning.

HARD AND SOFT FOODS.

If any one will moisten a gill of corn-meal it will be noticed that a large quantity of water will be absorbed. This water is not taken by the fowl voluntarily, but through necessity, in order to accept the food offered. Naturally the fowls drink but little water, and but a small quantity at a time unless deprived of it for quite awhile. When the crop is packed with soft food, and digestion is slow, decomposition begins, being hastened by the animal heat of the body. When the fowl consumes dry food, and must seek it, the first portion is digested before the last enters the crop, hence when it drinks there is but a portion of the food eaten moistened, and the crop is never full. This matter has been alluded to before, but it is one which should attract attention and receive consideration. To give soft food when it is necessary to do so is correct, but such food should be given only in limited quantities, and the ground food should be given dry in the trough, if possible, instead of forcing more water on the birds than they really require.

INQUIRIES ANSWERED.

How Large a Flock.—E. H. S. Prairie City, Ill., writes: "How many fowls would you advise a boy of sixteen years to start with, and how can chickens be best protected from rats?"

REPLY:—An energetic young man could manage a hundred by devoting all of his time thereto, but something depends on the conditions, situation, etc. A flock of about twenty should be a beginning. There is no mode of preventing depredations of rats except by cement floors or a liberal use of half-inch-wire mesh.

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Our Fireside.

THE TWO GATES.

A pilgrim once (so runs an ancient tale),
Old, worn and spent, crept down a shadowed vale;
On either hand rose mountains bleak and high;
Chill was the gusty air, and dark the sky;
The path was rugged and his feet were bare;
His faded cheek was seamed by pain and care;
His heavy eyes upon the ground were cast,
And every step seemed feebler than the last.

The valley ended where a naked rock
Rose sheer from earth to heaven, as if to mock
The pilgrim who had crept that toilsome way;
But while his dim and weary eyes essay
To find an outlet, in the mountain-side
A ponderous sculptured brazen door he spied,
And tottering toward it with fast-failing breath,
Above the portal read, "THE GATE OF DEATH."

He could not stay his feet that led thereto;
It yielded to his touch, and passing through,
He came into a world all bright and fair;
Blue were the heavens, and balmy was the air;
And lo! the blood of youth was in his veins,
And he was clad in robes that held no stains
Of his long pilgrimage. Amazed, he turned;
Behold! a golden door behind him burned
In that fair sunlight, and his wondering eyes,
Now lusterful and clear as those new skies,
Free from the mists of age, of care and strife,
Above the portal read, "THE GATE OF LIFE."
—Harper's Magazine.

The Heiress of Simpkinsville.

BY MABEL S. MERRILL.



Don't tell me you hain't heard of it, Mehitable Jennings!" said Aunt Nabby Bennett, loosening the strings of her "punkin-hood," which she always wore with supreme disregard of the weather or the time of year. "Give me one o' them doughnuts and a sip o' your coffee, if you've got a plenty. I declare, it's gin me sich a turn that I feel faint."

"Do tell," said Mehitable, easily, helping her neighbor liberally from her well-filled breakfast-table. "I'll lay that it's something about Ray Dean. What's she ben doin' now?"

"S'likely it's sunthin' about Ray Dean," returned Aunt Nabby, with scornful emphasis on the first name. "She can't even call herself by the decent Christian name that was left to her by her great-aunt on her pa's side. If Rachel Dean could see her namesake dauntin' round in silk dresses and capes with bows on 'em, and two rows o' stitchin' and kid gloves, and a hat with a rosy in it—"

"La, Nabby, she trimmed it herself, and it don't seem such a turribly sinful extravagance for a young girl to have two rows of stitchin' round her cape," argued Mehitable, mildly; "and mehbe somebody give her the silk dress. She looked real nice, anyway; your Sam thought so, I'll lay a penny."

"Sam can think what he's a-mind to—his opinions ain't no concern o' mine," retorted Aunt Nabby, visibly affronted. "If he wants to be too uppish to ask me to keep his house, he kin live alone, and eat biscuit with a pint o' suleratus in 'em. But he's my dead brother's son, and I shan't stand by and see his house and farm sold at auction to pay for silk dresses 'n' dummery without speakin' my mind about it. No nevy of mine shall marry that spendthrift Dean girl with my consent—ef she has had a fortune left to her." And Aunt Nabby put her cup on the table, and eyed her hostess with triumphant calmness. Mehitable sat down with dramatic suddenness.

"You don't mean it?" she gasped.

"I don't, don't I?" returned Aunt Nabby, with a kind of serene irony. "Nabby I didn't see the will her uncle on her ma's side, old Josh Simpkins, up to Simpkinsville, made. He owns the hull of Simpkinsville, I've heard tell, or did till he went 'n' died last week."

"Simpkinsville. Why, that's where Ray boarded all that time she went to the seminary way up there. She kept house for her uncle, I understood, and walked clear over to the next town every day to school. The Simpkinses were allus turrible snug, and I s'pose Ray had to pay for her keep in that way. And he's left her his property! Wal, I'm free to confess I'm glad of it, Nabby."

"He might's well left it to a couple o' bar-swallowers as to Ray Dean and her ma," retorted Aunt Nabby, crisply. "That girl'd run through it in a year if 'twas a million, and Mis' Dean wouldn't have sense enough to stop her. She was allus limp as a wet rag."

"Sam's a good hand to take care o' property," hinted Mehitable, "and he's as nice and likely a young man's there is in town; but mehbe she wouldn't have him, nohow," she added, soothingly, as Aunt Nabby tied the strings of her "punkin-hood" with an indignant twitch, and started over to tell Mrs. Pettibone, the deacon's wife.

Society as represented by the inhabitants of Pettibone Corner village had a favorite theme of conversation in the "doin's" of "that Dean girl." The Deans had been people of consequence once in the place. They had owned the big stock-farm that was the pride of the town still, though it had passed

into the hands of Jeremiah Willet, a bachelor of forty, with one eye and a reputation for "nearness." The Deans, of whom only Ray and her mother remained to represent the family, owned now only ten scrubby acres, and a little house much the worse for wear, and having a disagreeable habit of hoarding up large quantities of rain-water in its cellar. Mrs. Dean had lived here alone for some years after her husband's death, while Ray kept house for the above-mentioned uncle in a distant part of the state for the sake of going to a neighboring seminary. But she had graduated, and come home to take her place as head of the family, she said; and certainly there was need of a more efficient head than Mrs. Dean. Ray was a pretty girl, with sleeves of the newest cut, and dainty millinery crowning a head that came up like a fawn's when she moved or spoke. Aunt Nabby, the self-elected arbiter of Pettibone Corner society, instantly pronounced her "stuck up," and there seemed some support for this opinion in the fact that she was seldom seen at the Corner social gatherings, and wore herself in a somewhat reserved manner with her old neighbors.

"Putting on airs because she's a Dean and has been to one o' them fancy schools!" Aunt Nabby said, with a sniff of disdain.

The old house, too, began to take on a different aspect which seemed almost like an affront to Pettibone Corner—a frugal town that had furnished its houses fifty years or more ago and didn't believe in new things.

"If you'll helieve me, she wa'n't contented with paintin' the front steps and puttin' straw mattin' in the entry, so she's ben and fixed up the settin'-room with all kinds o' colored curtains an' things," Aunt Nabby had reported to Mrs. Pettibone a few weeks after Ray's home-coming. "An' she's got down the planner that belonged to her great-aunt Rachel, on her pa's side, and had a mau with a pink neektie and p'inted toes to his boots away from Eliot to fix it up. She'd better 'a' sold it an' put the money in the bank. She had a lot o' flower-seeds come by mail the other day, and she's diggin' holes all over the front yard to put 'em in. If you don't eall sich works a sinful show and extravagance I don't know what 'tis."

Thus the tireless news-carrier of Pettibone Corner retailed the doings of the new-comer, keeping such minute accounts of every change in her young neighbor's tasteful attire, and giving such highly colored descriptions of her wardrobe and house furnishings, that the "Dean girl" formed the staple of conversation at quiltings and tea-drinkings and furnished the text for numberless lectures on dress and extravagance.

But when, only yesterday, Ray had walked into the little Corner church clad in a pretty gray silk dress with bits of lace here and there, a dainty hat and gray kid gloves, Pettibone Corner had stared and then turned its back in horror, wondering what end she expected to make.

Only Mely Pettibone, sitting in fluttering splendor beside her father, thought it wasn't any prettier than her striped unslin, and that it wasn't any use for Ray to be setting her cap for Sam Bennett, for Mely was sure he wasn't looking at her at all, but straight over at—well, not at Mely, perhaps, so much as at her father's great tall hat, that, perched on the seat beside her, seemed to be solemnly waiting like its owner for the beginning of the services. It showed what direction Sam's thoughts were taking, anyway, Mely thought, forgetting that appearances are deceitful and never dreaming that Sam, apparently staring over at their pew, was yet aware of every movement of the graceful gray-clad figure at his left. He could see without looking the gleam of Ray's hair where the sun touched it, and he dared not think of the beauty of the clear eyes uplifted to the figure of the young minister just coming in. Sam felt a passing twinge of jealousy to see the intent look. John Pettibone, the deacon's son, just home from the theological school, had been his playmate and hers when they all went to the village school together. He, Sam, had been her chosen comrade then, but he had seen little of Ray since she came home from the seminary. She was educated and a fine lady, he thought, and he was only a farmer. It wouldn't be any wonder now if she should prefer John to him. He turned his head resolutely and stared over at the deacon's hat, while Mely wondered if he found it lonely getting his own breakfast of a Sunday morning, and thought it a pity he didn't have somebody to see that he got his tie straight. She was sure he was a good-looking fellow, and she liked him better than she did Jeremiah Willet. He had two eyes, anyway, if he didn't have forty cows, and it was no use for ma to hint. As for Aunt Nabby, it is to be supposed that she thought of nothing but the sermon, for she sat and stared at the minister with an intensity that put that hashful youth quite out of countenance. But she passed the gray dress with unnecessary determination on her way out after the services, and glared at Sam alarmingly when he asked her to come over to dinner. Aunt Nabby had a house of her own in the village, and never forced her company on anybody, she said, but she had never gotten over her resentment at not being invited to become housekeeper for Sam, who had no relative but her, and lived alone on his pretty little farm by the river.

So she was already jealous of Sam's future wife, and when that very evening she learned the story of the Deans' legacy, she instantly thought with joy that that "stuck-up girl" was now out of Sam's reach.

"Tain't no use to be makin' eyes at her any more, Sam; a girl that owns the whole o' Simpkinsville ain't goin' to let herself down to marry a farmer with only sixty acres and a house," she said to her nephew the next morning, invading his peaceful premonitions to deliver her news.

Sam sat in silence while she poured forth what information she had been able to gain, with profuse comments of her own. He remained moveless on the door-step while his aunt finally conveyed her "punkin-hood" across the Jennings field opposite.

"The whole of Simpkinsville!" he repeated to himself.

Aunt Nabby was right, he thought; Ray was lost to him; she was an heiress, and she would go away to some home that was more fit for her.

"It wouldn't be honorable to ask her to throw herself away and settle down in a little dull place like this," he said, "even if she would do it, as she might for the sake of old times and to save hurting me. She's tender-hearted in spite of her independent ways. But it would ruin her life; she was meant for something better."

He got up from the step and looked at the little white house, where he had so often pictured Ray waiting for him on the piazza with the petals of the climbing roses falling on her hair. It was a pretty little place, with the roses and the old-fashioned pinks, and the blossoming clover-patch sloping down to the slender shivering river.

But away up there where her uncle had lived there was probably a grand house waiting for her, with all that money could buy. He felt a sudden bitter jealousy of unknown Simpkinsville. He was glad it was so far away that there was no chance of his seeing it or hearing about it. The Pettibone Corner folk were not given to "traipsing," and Simpkinsville might as well have been in another world as far as they were concerned.

Sam swallowed a lump in his throat as he went into the house. The image of Ray would always live in that house like a fairy shadow, but Ray's self would never come now, and he must go on with life as best he could.

The summer passed slowly, and the autumn came trailing her royal robes over the hills with a glory that transfigured Pettibone Corner. As the days went by Ray was seen less and less often by her neighbors. She seldom came even to church now, and the silk dress was laid away out of sight of Aunt Nabby's sharp eyes. Her mother was feeble, Ray said when any one questioned her. Mrs. Jennings, looking across the field to the isolated little house among the trees, had half a mind to step over and see what she could do to help Ray, but she remembered the fortune and grew shy.

"La!" she said to herself. "I s'pose they're just rollin' in money. 'S'likely Ray could have help if she wanted it, and everything else. I most wonder she don't slick up the house some more or have a new one; but there, I s'pose they're plannin' to go right away as soon's Mrs. Dean's well enough. I guess I'd best not go over. They might call it meddlin', and I allus did calkulate to mind my own business—fur's I know what is my business."

Similar, though in many cases less kindly, feelings kept the other neighbors from going over to the secluded little house behind the trees. The Deans were left to the enjoyment of their fortune.

"Oh, ma Pettibone!" cried Mely, rushing in one day. "I've got to have something done to my blue dress right away. There's goin' to be a picnic this very afternoon, and everybody's goin', and it's too late for my unslin—come, say somethin', ma."

Mrs. Deacon Pettibone, standing impassively in the center of her clean kitchen, counted her jars of blackberries with unconcern.

"You'll git so you'll want a dress for every hour in the day, like the king o' sunthin' or other," she said at length, "only 'twas a coat in his case. Where's that new Scotch gingham, Mely Pettibone?"

"Gingham!" fumed Mely, "to wear over to Willet's grove, and the supper on Jeremiah's lawn, with Chinese lanterns hung in the trees! You're crazy, ma!"

Mrs. Pettibone's face changed. "Oh, 'f it's over there," she said, a little consciously, "you'll have to have something fixed up, I s'pose. But I don't know how you'll get it done in time. The sleeves of the blue dress are all wapple-jawed since I cut 'em over, and I don't see no way to fix 'em. Why don't you run over and see if Ray Dean won't show you about 'em. She's real handy and stylish. I wish to goodness you could hny a suit ready made. I don't want to leave off in the middle of my preservin'. It 'pears as if folks got up picnics 'n' sich a purpose to plague a body," she finished in an injured tone, as Mely ran up-stairs for the blue dress.

Aunt Nabby Bennett, sitting at her window that afternoon, was greatly disquieted by the sight of Sam in his Sunday suit going over toward Willet's grove with the other picnickers.

"He's goin' to see if he can't git a glimpse o' that Dean girl, I'll be bound," she said, wrathfully, to herself. "I wish she was in Ginny, money 'n' all."

Aunt Nabby in her narrow quarters in the village was still casting covetous eyes at the pretty homestead by the river where she longed to reign supreme.

Sam mixed rather absently with the hilarious crowd at the grove. He hardly expected to see Ray, but he was tired of the company of his own thoughts. He stood leaning against a tree, his eyes roving over the various groups.

Deacon Pettibone, with his thin wisps of hay-colored hair slicked out from under the immense hat bequeathed to him by his ancestors, had assumed quite a dandified air as he talked with comely, comfortable Mehitable Jennings. His wife, thin of aspect and dry of speech, was anxiously looking out for Jeremiah Willet, and hoping he would approve of Mely's dress. She meant to tell him in an impersonal way what a good butter-maker Mely was and artfully lead the conversation to his forty sleek cows.

Sam noted this little tableau, then his pulses leaped at the sight of a slight gray-clad figure sitting on a bench a little apart from the group. Her back was toward him, but he remembered, though he had seen it but once, every detail of that gray silk dress and the pretty little hat with its spray of roses. He looked, faltered, looked again, then straightened himself resolutely.

He would speak to her. He had not had a word with her all summer except a brief "good-morning" when he met her now and then. She would have to look at him, anyway, if he spoke to her. He could see just how the beautiful clear eyes would lift at his greeting.

He walked firmly and rapidly over to the group and stopped beside the gray-clad figure. "Ray," he said, hardly daring to look at her.

The head turned, and Mely Pettibone's round, smirking face looked up at him from under the pretty hat.

"Oh, S-Sam!" she quavered. Sam felt as if he had been struck in the face. He stammered something as he strode away and sat down out of sight behind a clump of hazel. He turned heartsick with disappointment and a vague fear. Why was Mely Pettibone wearing Ray's dress? What had happened? He felt as though he had seen a ghost. Surely something must be wrong with Ray and her mother. Mrs. Dean had been sick all summer, he knew, and he remembered with a pang how pale Ray had looked when he saw her last five or six weeks ago. Had they lost any of their newly acquired riches? He got up unable to sit still as the thought occurred to him. He hesitated a moment, then leaped the fence and started across lots toward the Dean house.

He thought with a pang of fear that the place had a deserted look, as he went up the path between Ray's flower-beds. But the door stood open, and the inner door into the sitting-room was swinging in the light wind. He rapped, and entered in answer to a faint "Come in."

Mrs. Dean, looking as wan as a withered lily, lay on the lounge. She looked up at him with the gentle eyes Sam remembered—Ray's eyes. It was Ray's face grown old that smiled at him—only Ray's face showed strength where this spoke of weakness.

"Why, Sam, you dear boy!" said Mrs. Dean in pleased surprise. "I thought you had forgotten us. Go out and call Ray. She's in the back field."

Sam laid down the feeble hand he had taken and went, too much moved to ask questions.

"Why didn't somebody tell me Ray's mother was dying?" he asked himself in dismay.

The sun shone hot on the back field where the rows of potatoes lay, their ripened tops crisping in the heat. Ray, with her hair loosened and her cheeks mantling with color, was left-handedly jabbing her hoe at an obstinate potato that refused to part from its Mother Earth.

Sam made two strides to her side and took the hoe out of her hand.

"What under the sun are you trying to do?" he demanded, forgetting all about the heiress.

"I'm trying to get three bushels of potatoes dug before Tim Jones comes with a basket of groceries, to pay for them," returned Ray, in the prompt tone she had always used when they got into an argument coming home from school. It's almost time for him now, so don't bother. You always did have talent for getting around when you weren't wanted, Sam. Why on earth couldn't you stay at the picnic?"

Sam could afford to ignore these words with Ray's eyes laughing into his. The years and the higher education and Simpkinsville had vanished like a cloud from between them, and it was his old merry, wilful playmate that stood beside him.

His hand had fallen on her shoulder when he had taken forcible possession of the hoe. He held her so for an instant, looking into her eyes.

"Go and sit under that tree, Ray," he said, quietly, and Ray, with a shy glance up into his face, for once did as she was told.

The hoe immediately changed its line of conduct in Sam's practised grasp, and in a

very short time the three bushels of potatoes were securely tied up in the bags, ready for the groceryman when he should arrive.

Then he dropped the hoe and came over to Ray.

"You've improved the looks of your best suit remarkably," she said, ironically, as he sat down beside her. "In future you will be able to recommend damp earth as a cheap application for taking the stiffness out of new boots. What are you looking at, Sam Bennett?"

"At you," returned Sam, coolly scanning the face that looked pale and worn, with the flush gone out of it. "What does this mean, Ray?"

"It means that potatoes are sixty cents a bushel, and that I find a certain amount of provisions necessary to the support of the human frame," retorted Ray.

"Was that why you sold your dress?" asked Sam, quietly.

"No; that was for mother's medicine. I wouldn't have sold that for paltry eatables. It was a perfect monument to my genius, that dress; I made it out of mother's old white silk dyed with oak-bark; it matched my cleaned gloves to a charm. I did hate to sell it, but it seemed such a fatally good chance when Mely came over all in a fume about a dress to wear to the picnic; and I'd nothing else to sell except the dear old piano—and Simpkinsville."

"Well, why didn't you sell that or a piece of it?" said Sam, feeling sore at the sound of the name that had tormented him all summer.

"Go up and look at it if you want to know," returned Ray, with a forlorn laugh. "A charming country residence—barring the slight inconvenience of the roof and the upper floor having met prematurely—and five hundred acres of scrub pines. Possibly some lunatic might buy it with a view to founding a retreat for kindred minds. Uncle Josh took it in the firm belief that a railroad was to be put through and a village built on his land. He even had the streets laid out, and nobody calls it anything but Simpkinsville to this day."

A light was breaking on Sam's mind. Ray's absence from all neighboring gatherings, her mother's sickness, the worn-out little farm; the Deans had always been rigidly independent. The last year had been a silent, uncomplaining struggle with want. He understood now the cause of their reticence.

"Why didn't you tell me, Ray?" he said, in a hurt voice.

"Tell you what? That I had potatoes to dig? I planted them myself on mother's land, and I hope I may take the liberty of digging them," returned Ray, wilfully.

"But your mother, Ray," went on Sam, heedless. "She's suffered. I know by the looks of her, and she's wanted a good many comforts."

"She hasn't wanted any I could get for her," returned Ray, with a quiver of her lip. "I'm not too proud to ask help for mother, Sam, but nobody can help me here. The doctor says the only thing that can cure her is a complete change, and how can I give her that unless I get a place to teach? And she's so feeble now I couldn't leave her through the day; the house isn't fit for her to live in. I know, and I should have taken her up to uncle's old house if it had been any better; but the roof caved in one day. He would always have it that it didn't need repairing, and—"

"Ray," interrupted Sam, stretching out his broad brown hand and laying it in her lap, "look at that. It ain't handsome, but it would work for you and your mother as long as there was any life left in it, and there's an empty house that will be empty always unless you come to it."

There was silence for a minute, which was broken by Sam.

"Don't be afraid to tell me if it's no, Ray," he said, fear beginning to pull at his heart; "it won't hurt any worse than it's hurt all summer to think that you were rich and out of my reach forever, as they said you were."

"Sam," interrupted Ray, looking up to him with a half-pathetic, half-resentful look, "do you think a woman who had a fortune left to her wouldn't have any further use for her feelings and memory?"

Sam's heart began to beat with a sudden hope. "I never thought it would matter much to you whether I went or came," he said. "Do you mean that it did matter, Ray?"

Ray lifted his hand from her lap with both of hers and laid her cheek against it.

"Never mind what I mean, you dear old simpleton," she said.

"Yes," said Aunt Nabby two weeks later, as she tied the strings of her "punkin-hood" at Mehitable Jennings' door. "Sam's married. He can give up his best room to a sick man-in-law, but I ain't good enough to do his work for him. Wall, there's a place for me yet in the world, it stands ter reason, or I shouldn't 'a' ben put inter it. Providence made me and set me a-going, I s'pose."

"It does look as if Providence might 'a' ben better employed, don't it?" reflected Mehitable, as her caller vanished down the garden path; "but then we can't see both sides. Thistles ain't a mistake o' natur'. I reckon, though roses and mornin'-glories are more agreeable to most all kinds o' folks—except donkeys, maybe."

BOOKS AND DOLLY.

DOLLY," said I the other day, as my niece came in from school. "I should like to talk to you a little after dinner, my dear, if you have time."

"The idea!" said Dolly, with just the slightest glance downward toward a little strapful of books under her arm. "You funny uncle! If I have time!" She looked very rosy and pretty and happy, as she seated herself at the table, after kissing my sister, who seemed to enjoy the little ceremony—as, indeed, so did I. Dolly ate, as usual, with a good appetite.

"Well, Winifred," I said, after hearing up for some time under the volley of interrogatives which came over the table to me from my sister's kind eyes. "Never mind; I'm not going to do her any harm."

"No, John; but—but I didn't know there was anything—I'm sure from the way you look there must be something."

"By the pricking of my thumbs,
Something wicked this way comes,"

I quoted. "Well, I hope I'm not going to be wicked, but I shall certainly be serious."

"Why, uncle!" said Dolly, looking up, half startled in spite of her theory—which I have heard her state openly—that her Uncle John's bark is worse than his bite. You're not vexed with me about anything, are you?"

"No, my dear," I said, "not with you!" "Because if you were," jumping up and bringing the bundle of books, from one of which she drew a card, "look at this!"

It was a monthly high-school report, with a comment of "excellent" to her credit in every study.

"That is very good and gratifying; it will please your father," I said, somewhat gravely.

"It pleases my uncle, doesn't it?" asked Dolly, with a puzzled look.

"Ye-es," I said, "all but that." And I pointed to the item which read, "English Literature, excellent."

"But why do you say 'all but that,' inquired my sister, who had come to look over my shoulder. "I should have said you would like that best of all."

"So I should, indeed," I cried, warmly, "if it were true; but it isn't. And that is what my sermon is to be about. Have you finished your dinner, Dolly?"

"Yes," said Dolly. She had finished finely, and was plainly inclined to be injured at my flat contradiction of so sacred an authority as a monthly report. "But—but—it says 'excellent,' doesn't it? What can you mean?"

"Yes, it says that, Dolly; but look at this. Here's a bit of testimony on the other side. How much literary taste does this bear witness to? Do you really think that any one whose appreciation of literature was excellent would spend four or five hours a day—or one, for that matter—in reading such—such rot as this?" I lifted two books from Dolly's little pile on the table. They were thick duodecimos, brown-paper covered, and edges dingy with much thumbing, and a bold label on the outside, "Barfield Public Library, Seven Days." I held them up with somewhat gingerly care, for their aspect was not savory, and there exhaled from them an unspeakable musty, fusty odor which was not that of sanctity.

"Why, John, surely they are not—wrong books, dear," cried my sister Winifred. "You must be mistaken about them. What are they?" She reached her hand toward them, but I tossed them impatiently aside.

"I don't know," I said, ruthlessly, "and I don't think I care. It isn't in the least hard to imagine what kind of thing they are. 'Lily's Sweethearts,' by The Duchess, like as not, or 'Gladys: The Tale of a Lost Love,' by Gioriana Strange, or—"

"They're not, uncle," began Dolly.

"It doesn't matter. That's the breed, I'm certain. Wrong books? Yes, and immoral books. In the first place, if the handling of such dog's-eared, bedraggled, unclean volumes as these isn't a question of morals, it comes very near it."

"John, John!" murmured my sister in a shocked tone, though with a glimmer of sympathy in her quick look.

"No, I'll not be smoothed down," I said, warming to my subject. "I'm sick, fairly sick, of this great and glorious American public library business; not in its theory—that's all very pretty—but in its working, under the management of stupid buying committees and stupider librarians."

"Why, uncle," said Dolly, "Miss Otis is just lovely!" There were tears in my niece's eyes. I felt sorry for her. After all, it was not entirely her fault, or the library's. There were not ten good books in the home in which she had spent the first fourteen years of her life. Her own mother read nothing but trashy novels, and her father "had no time" for anything but the newspapers and his mining journal, although he had some pride in the fact that his wife and daughter were such "great hands to read."

He was the prosperous superintendent of a great western mine, and had sent his daughter East to be properly educated. She came from a community in which to read at all was to be admired. The wonder and pity of it was that during the two years of her life with us, our traditions of good taste (Winifred, with all her fond excuses for Dolly, is

quite as keen as I in her discrimination), our carefully chosen home library and our exceptional high school—this clever girl had not been weaned from her unwholesome appetite for vulgar sentimental fiction. The real interest of her budding womanhood lay in the reading—or gobbling—of cheap novels. With the amazing conscientiousness of girlhood she performed her school tasks faithfully, and her teachers gave her the credit which was due to her success in acquiring information. From eight till four she was busy with school and with her lessons for the next day. But having done her problems, read her fifty lines of Virgil, and studied her scene of Shakspeare (all in the same spirit), she plunged into a story, and seldom emerged till bedtime. I had tried to laugh her out of the habit, but with no success. She didn't like my books, either, she said.

It was time to take sterner measures. So when those tearful eyes began to beg for mercy, I would not see them.

"How many of these—these things do you read every week, Dolly?" I asked.

"Three or four, usually; it was four last week," said Dolly, slowly.

"And I suppose it doesn't occur to you that you are a dissipated girl, the slave of a distressing habit? Yes, and, to put it more plainly still, you are often intoxicated. I have noticed that during a large part of every day—you keep sober during working hours, to be sure—you are under the influence of a stupefying drug. You are dulling your intellectual faculties with too much small beer, just as our neighbor, the little Dutchman (who is a very well-meaning fellow, by the way), dulls his when his day's work is done. What does it mean, pray, when you come to supper with burning cheeks and shining eyes, and can hardly speak or listen or eat till you find out whether Angelina listened to Edgar's addresses or not? Isn't that intoxication? I have known several mental drunkards made in just this way—incurables; there is no Keeley method, I believe, for this sort."

Dolly wasn't tearful now. She sat erect and clear-eyed and proud; and I'm afraid she was more angry than impressed with my figure of speech.

"I don't think it's a bit like you to talk this way, uncle. You know father and mother like me to read. And our literature teacher says the Barfield library is a very good one; and I didn't know you felt so about novels, I'm sure."

"About novels? I don't. I like a good novel as well as any one. I could give you a list of a few hundred or so novels which would be well worth your reading—reading, not skimming; you couldn't manage four a week."

"I've read almost all of Dickens and Scott," said poor Dolly.

"And Cooper?" I asked. "Well, I'm glad of that. It's a good thing to have done at your age. But bless you! there are other good things left to do. You ought to be going on, now that you have made a start. Certainly you oughtn't to go backward. What a drop from 'Ivanhoe' to 'the Elsie Books,' from 'Bleak House' to 'Molly Bawn!' My dear, have you ever heard of Thackeray and Jane Austen and George Eliot and Hawthorne?"

"Oh, yes," said Dolly, listlessly. "We've studied them all in school, but I don't care for them. Things are so long happening."

"Well, if you must have happenings, why not try Crawford and Stevenson and—"

"But I didn't know they were any better than the others," said Dolly. "I don't understand style, and that, you know."

"I know. You don't understand. How should you? These books are in the public library, and the library is supported by the town. A book is a book, and therefore where's the harm? I wonder how many Barfield boys and girls reason in that way? I wonder how many Barfield parents look at a library book with a certain reverence, as if the stamp on the cover were a fetish which guaranteed its contents?"

"There, go about your studies, my dear; think a little of what I have said, and see if you can make anything out of my growling that will help you."

Poor Dolly left the room with hanging head, gathering up her books as she went with something of a protecting air. As the door closed I felt my sister's eyes upon me. There was a mild reproach in them which I hastened to meet.

"I know, dear, it's largely the fault of her home training. I wish it could be felt here in America that a family without a good private library is infinitely more to be pitied than a family without a piano. We shall wake some day, as a nation, to the sense of the seriousness of our fault in letting our children think that a public collection of books can be substituted for the private library. I have a fancy that a man's own books are like his violin—always at hand ready to minister sweetly to the mood of the moment, giving an atmosphere to his thoughts merely from their presence; comforting him, in short. A public library is a big organ, to which we go from time to time, and on which we play laboriously with one finger, made uneasy by the very vastness of its mechanism and resources."

When I am eloquent my sister Winifred is perfectly attentive; only there is likely to

be a tiny spark of humor shining in the corner of her demure eyes. Seeing such a signal, I pulled up a bit, and went on:

"Sometimes I think we should be better off if the public libraries were used only for purposes of reference. Unfortunately, people don't buy books when they can borrow them. How many well-to-do families in this town have a hundred good books?"

"But there are very many more families that are anything but well-to-do; they can't spare money for books, they really can't," objected my sister.

"I'm almost inclined to doubt it in these days of low-priced editions," said I; "but to grant that there are persons who must rely entirely upon the public store is to demand that that store be carefully chosen. There ought to be in every town or city some person or persons to exercise a skilled oversight in the make-up of the local library."

"But there are committees, aren't there?" asked Winifred, innocently.

"Yes, there are committees, I suppose, but they must be ignorant or careless, in many cases. Probably not one library in a hundred is entirely free from material which is in no sense literature. Perhaps the local boards can't manage it. Well, then, why isn't it a matter for the state to take in hand? Why not have a Library Bureau, and a Library Censor, a man of cultivated tastes and wide sympathies, who should, with the aid of competent local assistants, pass judgment upon every book that is likely to be bought or received by gift in any public library? Surely this matter of prevention can be taken care of in some such way. As for the instruction of our young people in the uses of the public library, and their encouragement in getting together books of their own, these matters must be left to mothers and fathers and teachers, though they need to be waked to their responsibility."

"I think the parents and teachers are quite conscious enough of their responsibility," interrupted Winifred, with some energy.

"Why must you ask them to be more miserable than they are? Don't you think, John, you are perhaps a little—a little—"

"Cranky?" I asked. Just then Dolly came into the room with her lessons—all done expressively, and an evident disposition to forgive. She carried a brown-paper covered book in her hand, and without hesitation came up to me and kissed me.

"Uncle," she said, with a coaxing smile, "you won't mind if I read this one, will you?"

I opened the book she held out to me. The paper was wrinkled, the typography was poor, the binding was flimsy. The title-page read, "Fancy Free; or, A Widow at Seventeen," by A. O. L. G."

"The girls say it is perfectly lovely," continued Dolly, confidently. "Miss Otis, the librarian, recommended it to Minnie."

And what was there for me to say?—John Walcott, in Outlook.

VALUE OF THE EGG IN SICKNESS.

The value of egg albumen as food in certain diseased conditions is pointed out by Dr. C. E. Boynton. When fever is present and appetite is nil, he says, when we want an aseptic article of diet, the white of an egg, raw, serves both as food and medicine. The way to give it is to drain off the albumen from an opening about half an inch in diameter at the small end of the egg; the yolk remaining inside the shell; add a little salt to this and direct the patient to swallow it. Repeat every hour or two. In typhoid fever this mode of feeding materially helps us in carrying out an antiseptic plan of treatment. Furthermore, the albumen to a certain extent may antidote the toxins of the disease. Patients may at first rebel at the idea of eating a "raw" egg, but the quickness with which it goes down without the yolk proves it to be less disagreeable than they supposed, and they are very ready to take a second dose.—Pacific Medical Journal.

105,106 APPLICATIONS FOR OFFICE.

There are now on file at the White House and the leading departments 105,106 written applications for office, most of them indorsed by representatives or influential politicians. Some of them are indorsed by the entire state delegations, including senators. Applications are still pouring in at the rate of about six hundred a day. Each application is accompanied by several letters of indorsement, and the whole forms an immense mass of correspondence. The Treasury Department figures show that New York has most of the seekers. The applications for office in the treasury by leading states is as follows: New York, 303; Illinois, 264; Ohio, 236; Pennsylvania, 206; District of Columbia, 150; Louisiana, 183; California, 136; Texas, 127.—Philadelphia Record.

\$200 IN PRIZES FOR AUGUST.

On page 19 will be found the full particulars of FARM AND FIRESIDE'S August word contest. How many words can he made with the letters in the word "Beautiful?" The first prize is a \$100 bicycle. There are five cash prizes amounting to \$100.

TRAINING IN AGRICULTURE.

In a paper before the Ohio state farmers' and breeders' institute held in the state senate chamber, Columbus, last winter, Professor Thomas F. Hunt said in part:

"It is impossible in a paper of this character to state fully of what technical instruction in agriculture consists. I can only give examples. The student studies the soil, is taught to analyze the soil; he studies its physical properties, finds the number and size of the grains in the soil. He finds from this study that the exterior surfaces of the minute particles in a cubic foot of soil may equal three acres, and that soils differ largely in this particular, and the power of crop production depends in a measure upon this fact. He finds for himself from actual trial that an important difference between the rock and the soil is the fact that the rock is solid and that one half of the space in the soil may be unoccupied by soil particles. The student is taught the use of fertilizers, and how to calculate their value; he is taught the manner and methods of drainage and irrigation and of tillage, and the effect and use of various farm implements upon such processes. The history, use and culture, climate and soil adaptation, harvesting and marketing various varieties of farm crops are carefully studied. Kinds, care and management of live-stock are taught. The student is taught the characteristics that each class of animals should possess for special purposes, and by means of score-cards students are taught to judge the various classes of live stock.

"As an illustration of what may be accomplished in this line, thirty students of the university judged six cows from the herd of a leading stockman of this state. After the students were through he stated to me that he would sooner risk his cattle in the hands of those students than in the hands of any of the judges at the eight county fairs at which he showed his cattle this season; yet most of these students had but two lessons in judging this particular class of animals, in addition to a couple of lectures upon the subject. The student is taught the principles of breeding and mating animals, and is taught to understand and properly interpret pedigrees. He is taught the principles of feeding, and how to calculate feeding rations which will bring the best results with the foods at hand and for the purpose used. Butter and cheese making and testing and pasteurizing milk are most thoroughly taught with ample facilities and expert instructors. Three thousand feet of floor space are already devoted to the machinery and apparatus for this purpose, and Townshend Hall, which will be ready for use this fall, will contain six thousand feet devoted to machinery and apparatus for instruction in butter and cheese making, testing and pasteurizing milk, and the management and operation of boiler and engine. No handsomer suite of rooms can be found anywhere in America for this purpose than will be found in this building. Fruit-raising and vegetable-growing and greenhouse work are thoroughly taught. In addition to the large gardens, lettuce, radishes and tomatoes and other vegetables are raised by subirrigation under glass. Grafting, budding, cross-fertilizing, trimming and other technical work of the horticulturist the student is taught to do. Both forestry and floriculture are given special study. Diseases of animals, diseases of plants, insect enemies and insect friends receive proper attention, and methods of treating diseases and combating insect enemies by spraying and otherwise are amply taught. The skill which students acquire in the forge-shop and in the carpenter-shop, working but six hours a week for ten weeks, is truly remarkable."

It must not be understood that this is all that is taught in the courses in agriculture and horticulture. These courses of study give a good general education along with the special instruction relating to all branches of agriculture. For example, the four-years' course in agriculture consists of about one third technical agriculture, one third science and one third English and other languages, philosophy, history and economic science.

THE OHIO STATE UNIVERSITY.

The astonishment of most people upon their first visit to the Ohio State University is a matter of surprise when we remember it is a state institution, and therefore belongs to the people themselves.

Many persons fail to realize that there is located at Columbus one of the leading seats of learning of the central west. The university now has over eighty instructors and thirty-four departments of study, and offers thirty distinct courses. The university is divided into six colleges: Agriculture and domestic science; arts, philosophy and science; engineering; law; pharmacy; and veterinary medicine.

The income and expenses of the university for the year 1896 were \$175,000; \$55,000 was received from the general government, about \$90,000 through acts of the state government, \$22,000 from fees, the remainder

from minor sources. Aside from the College of Law, for every dollar that the student paid for instruction at the university the state expended upon the student ten dollars.

The average aggregate fees paid by each student for instruction is twenty dollars a year. In the College of Agriculture and Domestic Science the state even goes further, for the board of trustees offers two free scholarships from each county in the state.

The university has three hundred and forty-five acres of land in the corporate limits of Columbus; has ten buildings devoted to instruction, and three more in process of erection.

One of these is Townshend Hall, the new agricultural building, which with equipment will cost about \$100,000, and will be one of the most complete buildings ever erected for this purpose.

CONCERNING THE AGE.

It is well known that women witnesses shrink from telling their true age in court. But the foible is not one of sex. Court habits will tell you that many men who certainly are no longer in the ranks of young America shrink from a true age statement. For that matter the average man has as much personal vanity as the average woman. I have long noticed in hotels and on ferry-boats that gentlemen gaze quite as often into the mirrors while they pass as do ladies. With the latter the focus of attention is the hat or bonnet, but with the former the collar or the mustache.

IN ILLUSTRIOUS COMPANY.

The door of the corner saloon suddenly opened, and a greasy vagabond shot out through it with great violence, apparently moved by some strong impelling force behind him.

Rising slowly from the gutter into which he had rolled, he picked up his hat, adjusted it on his head, and turned stiffly to the solitary bystander who had witnessed the scene.

"I presume I remind you," he said, "of some unfortunate European ruler. I am the victim of a hum-thrower."

And he moved with heavy dignity down the street.

SUMMER PLEASURES.

THE GREAT PENNSYLVANIA RAILROAD'S PLEASURE-RIDES TO MOUNTAIN, LAKE AND OCEAN.

The pleasure resorts of the United States are equal in every respect but age to those on the continent of Europe, and indeed they are superior to the European place of recreation and enjoyment in many respects. It is very doubtful whether there is the equal of Atlantic City for variety of scene, safety in bathing, perfection of arrangement and economy in living anywhere from England all the way through the domains of the effete monarchies of the Old World. Travelers who look at what they see instead of where they see it are a unit in declaring that the Alpine wonders of Switzerland are not surpassingly great and beautiful and grand when compared with Allegripus or Horse Shoe Bend in the Alleghenies, Jack's Narrows along the blue Juniata, the Wyoming valley, the stupendous mountains of the anthracite coal regions, or the beautiful combination of city and country, mountain and valley, river and plain as viewed from Mount Penn or Never-sink Mountain in the historic Schuylkill valley near Reading, Pa. It is generally conceded that the pastoral scenery of Pennsylvania between Harrisburg and Philadelphia is unequalled anywhere on this planet; and certain it is that a ride from Harrisburg north to Williamsport, or south to Columbia, along the banks of the Susquehanna is an inspiration.

The great Pennsylvania Railroad undoubtedly stands at the head of all the avenues that have been opened up to reach or penetrate these gems of America's wonderland, and it is indeed a pleasure to travel by way of this king of the railway systems of the world. No other railway is the possessor of such perfect appliances to insure the safety of its patrons from accident. No other railway operates trains of equal perfection in equipment or rapidity of movement. No other railway employs trainmen and attendants of equal intelligence or regard for the comfort of passengers. Any reader of FARM AND FIRESIDE contemplating a trip anywhere in America for either pleasure or profit will always do well to remember that the prairies of the West as well as the valleys and mountains of the East are gridironed by the rails of this greatest railway system of the world, and that New York, Philadelphia, Cleveland, Cincinnati, Chicago, St. Louis, Baltimore, Washington and nearly all intermediate points are alike included in the domain traversed by the perfectly systematized and swiftly moving trains of the Pennsylvania Railroad, while the connections made for all points North, South, East and West, from San Francisco to Boston, or from Chicago to the most southern confines of the United States and on into Mexico, are well nigh perfect.

REPORT OF JUDGES
IN JUNE WORD CONTEST.

SPRINGFIELD, OHIO, July 20, 1897.

MAST, CROWELL & KIRKPATRICK, Publishers Farm and Fireside.

Dear Sirs:—We, the judges in your June Word Contest, after a careful examination of the lists of words submitted to us, formed from the letters in the three words "Farm and Fireside," find that the following persons have formed the largest number of correct words, and we therefore award them the prizes:

NAMES OF PRIZE-WINNERS.

First prize, Lilla Faas, Leeds, Mass.,	1,351 words.
Second prize, George W. Armstrong, Lisbon, Ohio,	1,332 words.
Third prize, Henry J. Hiles, Philadelphia, Pa.,	1,330 words.
Fourth prize, Julia F. Lyons, Tolono, Ill.,	1,312 words.
Fifth prize, George Turner, East Cobleskill, N. Y.,	1,284 words.

The winners of the remaining prizes:

Mrs. H. A. Caton, Annapolis, Ind., 1,282 words; Robt. M. Black, Wilbraham, Mass., 1,263 words; Mrs. B. M. Buckhout, Saginaw, Mich., 1,235 words; C. S. W. Fox, Numidia, Pa., 1,224 words; Chas. H. Denniston, Pulteney, N. Y., 1,210 words; Mrs. Dr. Whiting, Troy, Ohio, 1,204 words; Cassort Boardman, Rushville, N. Y., 1,198 words; James Blaine Werner, Somerset, Pa., 1,192 words; Kizzie Cox, Carthage, Ind., 1,180 words; O. Staley, Charlottesville, Ind.,

1,121 words; Mrs. Jennie Hurlbut, Portville, N. Y., 1,109 words; Daisy Hodgson, New Orleans, La., 1,086 words; Mrs. Dora Fulton, Bendena, Kan., 1,080 words; Geo. H. Stanbery, Hopewell, Ohio, 1,079 words; May J. Curtiss, Williamsburg, Mass., 1,075 words; Mrs. Wm. McWhan, New Orleans, La., 1,074 words; John Vetter, Eldon, Mo., 1,069 words; Lizzie E. Gray, Cape Vincent, N. Y., 1,061 words; F. B. Ayres, Augusta, Kan., 1,055 words; Emma E. Crandall, Oneida, N. Y., 1,057 words.

We examined every list, judging them according to the conditions governing the contest. [The conditions were the same as those governing the August contest—not including the first condition—as given on page 19.—THE PUBLISHERS.] We found a number of very large lists of words, but examination proved that many of the words were not formed according to the conditions; in fact, in all of the largest lists we found a great many words which were not permissible, and in order to be absolutely impartial and fair we marked out all such words. For instance, all prefix and suffix formations (except those actually found in dictionaries in general use) were cut out; likewise all proper nouns, adjectives derived from proper nouns, obsolete, archaic, old English, foreign and compound words and variants, and all other irregularities.

Respectfully submitted,

C. E. ROSENFELT.
ENMA MURRAY.
THERON MCCAMPBELL.

TO OUR READERS.

In the June 1st and June 15th issues we offered twenty-five prizes for the largest lists of words which could be made from the letters found in the three words "Farm and Fireside." The contest closed June 30th. On the following day the lists were placed in the hands of three competent and disinterested judges, who soon found they had a big task before them. They labored faithfully until the evening of July 20th, when they rendered their decision as printed above.

The prizes were forwarded to the winners at once, and before this paper reaches subscribers every one of the twenty-five winners will have their prizes in their possession. As we do not know any of the winners personally, we will be pleased to hear from them upon receipt of their prizes. Judging from the names two of the first five are ladies, and all live in different states. The \$100 bicycle goes to a lady in Massachusetts. We congratulate her, and hope she will gain much health and pleasure from its use.

In this connection we want to thank all those who took part in the contest. There were quite a number who came near being prize-winners. No doubt next time they will strive a little harder and send in a prize-winning list. On page 19 will be found the particulars regarding our August contest.

PUBLISHERS FARM AND FIRESIDE.

WONDERFUL GROWTH OF OUR TIN-PLATE MANUFACTURE.

The British consul at Philadelphia writes his government on the subject of tin-plate. In the state of Pennsylvania, he says, the manufacture of tin-plate has become a leading industry. Before the McKinley tariff there were in the whole country only some half a dozen small languishing concerns engaged in that industry. Now there are one hundred and seventy-five black-plate mills. Of these sixty-four are in Pennsylvania, and with two exceptions are all no more than five years old. Improved machinery is used in them, and a general advance has been made in processes of manufacture. "It is now believed," says the consul, "that with proper fostering the time is not far distant when the United States will produce all the tin-plate required for its consumption." Pennsylvania alone is prepared to turn out this year no less than 250,000,000 pounds. And at the same time more than half the mills in South Wales are closed. Is it not evident that all these one hundred and seventy-five mills are "fakes," and that all their alleged output is smuggled in from England to deceive the tax-ridden American public? Have we not heard ten thousand challenges to the whole land to produce a single lot of American tin-plate in marketable quantity? And yet this British consul has the effrontery to make such a report as that! If it is not enough to strain international relations between the Akhoond of Swat and the Great Horn Spoon we should like to know what would be. Our private impression is that this perfidious consul has been bought up by some of the protected monopolies.

COMPLEXION.

Complexion is all a matter of digestion. Where there is good digestion a beautiful complexion is bound to follow. A well-regulated stomach invariably proclaims itself in a good-looking face, and to maintain this well-regulated condition attention to a fruit diet is recommended. Plums, blackberries, white and red grapes, oranges and peaches are among the table fruits, and it is difficult to say which is the best for a pretty complexion. If the skin is kept fresh and the diet is laxative the face will be good to look upon. People eat too much bread-stuffs. A mud-colored skin is usually an indication of bad blood. A good thing for a sallow skin is a trip to the nearest mountains—walk up, rest, and climb down again.—London Family Doctor.

WESTERN HORTICULTURE.

Jack—"Where's Bill now?"
Jill—"Out West."
Jack—"What doing?"
Jill—"Raising palms."
Jack—"Doing what?"
Jill—"Raising palms—making the tender-foot throw up their hands."—Yonkers Statesman.

FREEZING THE AIR.

Air can be frozen in a temperature of 236 degrees below zero, and the product, which can be hauled and felt, burns, so to speak, with its excessive cold. Frozen air can be produced in any quantity, but its cost, five hundred dollars a gallon, is likely to prevent a large business.

Our Household.

LET US LOVE WHILE WE MAY.

Tell me you love me! That is still the best
Of all the words you whisper in mine ear—
A charm that ever brings me peace and rest.
A talisman 'gainst grief and haunting fear.
I fain would hear it o'er and o'er again.
As thirsting blossoms crave the welcome
rain.

Tell me you love me! That alone is sweet.
Your fondest praises fill with vague alarm
The heart that has so little time to beat.

That knows how Chance and Change work
cruel harm.

The day will come, for all your pride and
care,

When I shall be no longer young and fair.

Tell me you love me! Dear, I doubt you not—
Each earnest promise made, each vow and
sigh

(You'll love me always? When you have for-
got.

It will be time, my love, for me to die!:
Yet talk no more of future golden hours;
Love me to-day—to-day alone is ours!

Tell me you love me! Life has been so sad,
So full of ceaseless toil, of crushing care;
Too grave am I, forgetting to be glad.

Half fearful all your joyousness to share,
Your love alone can make amends divine
And chase the shadows from this heart of
mine.

Tell me you love me! Have I lived to know
The precious gift that crowns a woman's
life?

Can it be true that you will stoop so low
To take me, poor and humble, for your
wife?

You love me, love me, is your sole reply?
Then is there no one worthier than I?

Tell me you love me! Life has been so sad,
Let us not tire of tender words and true;
The realms of Silence all too near doth lie,
And sweet endearing words are all too few,
Since I am yours and you are mine to-day,
Oh, let us love each other while we may!

HOME TOPICS.

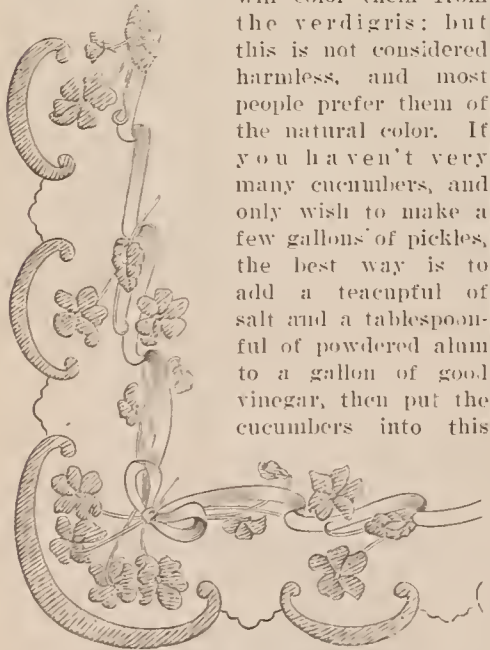
PICKLES.—August and September is
the time for making pickles. If
you wish to put cucumbers into
brine, cut them every day, leaving
a bit of the stem on the cucumber, wash
in cold water, and pack them in a large
stone jar, a keg or a barrel if you have
a great many. Put a layer of coarse salt
in the bottom, then a layer of cucumbers,
another of salt, and so on. No water is
necessary, as the cucumbers are wet from
washing, and the juice will be drawn out
and make the brine.

Put a thick cloth over the cucumbers,
and on this a loose cover with a weight
to keep it down. Every day when you
add more cucumbers and salt rinse out
the cloth, and put it over again.

If the cucumbers are not kept under
the brine they will become soft, and spoil.

When the cucumbers are wanted for use
they should be soaked in cold water over
night, and in the morning put them into
fresh water, and let it heat slowly until
nearly boiling. Drain them, pack in a
jar, and pour over them boiling-hot vine-
gar into which you have put a teaspoonful
of sugar and spices, if liked.

These pickles will not be green unless
you soak them in a copper kettle, which
will color them from the verdigris; but
this is not considered harmless, and most
people prefer them of the natural color. If
you haven't very many cucumbers, and
only wish to make a few gallons of pickles,
the best way is to add a teaspoonful of
salt and a tablespoonful of powdered alum
to a gallon of good vinegar, then put the
cucumbers into this



as soon as picked and washed. Keep a
weight on them, and a paper tied over
the top of the jar. They will keep per-
fectly, and if at any time you wish to
spice some of them you have only to take
them out of this vinegar into another jar

and pour the hot, spiced vinegar over
them.

FOR THE BABIES.—August is a trying
month for babies. Dress them comfort-
ably, keep them clean by frequent bath-
ing in tepid water, give them plenty of
sleep, plenty of fresh air, as near as pos-
sible the food that nature furnishes, and
guard against all sudden chills. These
are the essential rules in keeping the
babies well. To keep the baby dressed
comfortably one must watch the changes
of temperature, and put on or take off
clothing accordingly. It is a safe rule to
keep flannel over the bowels summer and
winter until a child is three years old. In
summer it need be only a wide band of
soft, thin flannel, loose, and held in place
by broad linen straps over the shoulders.

Small fruit, as blackberries, raspberries,
etc., should never be given to a little child,
as the seeds are apt to cause serious
bowel trouble. When a child is nine or
ten months old a little ripe sour apple
scraped fine is beneficial. An old phy-
sician told me this, and I found it the best
bowel regulator for teething children. Do
not, under any circumstances, make use of
the so-called soothing-syrups, which are
but preparations of opiates. They injure
the child both physically and mentally.

An excellent remedy in bowel trouble
from indigestion, and which I have seen
tried with best results in dysentery, both
for children and adults, is made as fol-
lows: Take two tablespoonfuls of pul-
verized Turkey rhubarb and one teaspoonful



of white sugar; put them into a pint cup,
and fill the cup nearly full of hot water.
Set it on the back part of the stove, and
let it simmer slowly for an hour; then add
a tablespoonful of soda, and when nearly
cold enough, extract of peppermint to give
it a pleasant taste. Put it into a bottle,
and cork tightly. Dose, one to two tea-
spoonfuls every hour; for infants, ten or
fifteen drops.

This is one of the most harmless home
remedies, and especially valuable when at
a distance from a good physician.

MAIDA McL.

VIOLET DESIGNS.

We have this time two very lovely de-
signs in violets by Miss Ida Bennett. The
round one can be used for a table-center
or for a round table. The corner design
will be found useful for a lunch-cloth or a
luncheon-scarf.

Violets are best embroidered in the red-
purples, using white for the ribbons and
white and green or white and lavender in
the border. Use a quiet-toned green and
only one shade for the leaves and borders.

L. L. C.

NECK ACCESSORIES, ETC.

These neck-finishings can be made sepa-
rate from the dress, and can do duty for
several. Make the foundation of sheer
India linen, and gather the lace upon it.
Finish the neck with a band and ruffle of
lace.

A SUMMER WAIST.—This is made of the
string-colored batiste over red silk and
trimmed with rosettes and crushed belt
of dark green velvet. Rhinestone buckles

are used in the rosettes. The openings at
the side, neck and wrists are finished with
voluminous lace ruffles. Five yards
would be necessary to trim it as full as
shown in the illustration.

This is a very good way to renovate a
silk waist that is a little worn, using it
under the batiste. Green is particularly
effective with this string color, as it looks
so cool.

L. L. C.

SULTRY SUMMER COMFORT NOTES.

The almost unendurable heat of sum-
mer days, with their myriads of flies and
mosquitoes and discomforts of a general
nature, calls into play the use of all man-
ner of devices for keeping cool, and for
saving not only of food stuffs, but of
strength and patience as well.

It is of personal comfort that I am
thinking especially this sultry day, and it
is of things for personal comfort I will
talk first. Of other things a little further
on. For, like the majority of this prosy
world of practical people, I earn my
bread by the sweat of my brow; and if I
must work steadily on despite the fact
that thermometers are every day threaten-
ing to burst with the intensity of this
midsummer heat, I purpose to work in
as great a degree of comfort as possible.
To this end I have fashioned and refash-
ioned my clothes.

Loose gowns to work in I have always
worn and advocated, and this manner of
"hygiene" I have preached, as it were,
from the house-top, as well as many other

their light weight upon the shoulders, I
am prepared for the work in whatever
form it comes. It is all a comfort per-
sonified. No more banded skirts, even for
special dress-up occasions.



A something that is worth passing on to
the household readers I learned of but
last season. And it is a something that I
have found such a decided help that I
wish every housewife to profit by my de-
scription. This "Yankee ingenuity" ar-
ticle of use is known as a "fly-slayer,"
and is well named. At my home these
articles (for one is wanted in every room
in the house, and can readily be afforded)
are considered a very valuable acquisi-
tion to our housekeeping.

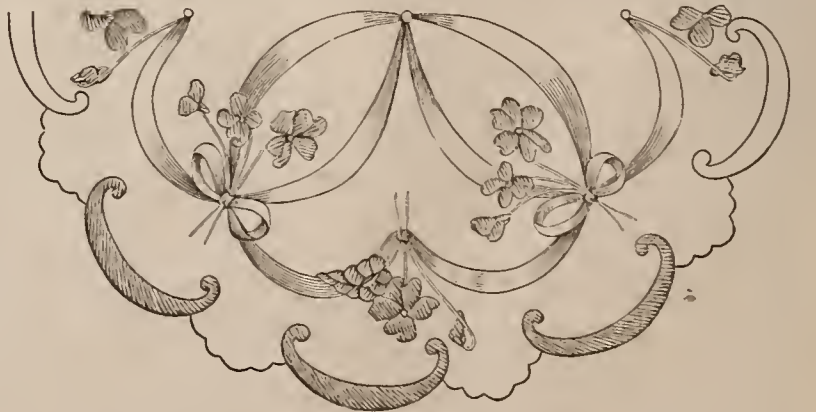
This might be an opportune time for
mentioning my advocacy of the afternoon
nap for every wife and mother, and my
own strict adherence to the rule. My nap
is a daily necessity. Moreover, a luxury
in which I persistently indulge, no mat-
ter "the times" are hardly warrantable
of an indulgence in luxuries. But did
every tired-out housewife indulge herself
after the same manner, I am assured
they would find it a paying investment of
time in the saving of time and strength
for the work that must be done in every
home. Denied the average amount of
health and endurance conferred upon the
average mortal, there is nothing left to be
done but to plan systematically, thus mak-
ing the most of the little strength with
which I am endowed. Should there be a
fly in the room, it is impossible to sleep a
moment, but since the introduction of the
fly-slayer in question there is no further
trouble from this source.

FLY-SLAYER.—It consists of a piece of
harness-leather cut in somewhat a kite-
shaped fashion, and measures six and one
half inches from the top to the inch-wide
place at the bottom, where it slips into
a wooden handle. This wooden handle is
a smooth stick of any desired length, split
down for one and one half inches, the
leather slipped in and held in place by
tacking securely with tacks or small
clinch-nails. It is five and one half inches
wide at the widest place, and the leather
is quite punctured with holes. It is a
novel and valuable ingenuity, and a death-
dealer in reality. My harness-maker was
easily induced to leave his more impor-
tant work and help me to carry out my
design, which I carried to him in paper
pattern form.

Waste pieces of leather were employed,
and the razor-like cutter fashioned these
pieces into available shape very fast. I
buy all my robes, dusters, harness and
fly-nets of said harness-maker, and he

kinds. I pity the woman so deluded as
to believe that close-fitting gowns and
"stays" she must wear, regardless of sea-
son or occupation. Her husband and son
will not be burdened with superfluous and
uncomfortable garments, and why should
she? And she is mistaken in the suppo-
sition that she cannot look well in clothes
that add to, rather than detract from, her
every-day comfort. Personally, I was an-
noyed by the gauze vests worn in sum-
mer, for they cling so persistently. And
skirt-bands about the waist were no less
an annoyance. But this summer I am
comparatively bondage free, and corre-
spondingly relieved, and it was last sum-
mer that I began to realize that both
bands and gauze vests could be dispensed
with entirely.

My white
skirts were
taken from
their bands
and put upon
low-necked,
sleeveless
waists, these
waist-supports
being length-
ened to suit
depth of skirts.
For some of
my skirts were
flounced onto a
yoke top. The
waists are so loose-fitting that they scarce-
touch the body, and the entire weight of
the skirt swings from the shoulders. With
a loose-flowing gown (they are pretty, too),
and if in the kitchen one of the large loose
aprons previously described, that also rest



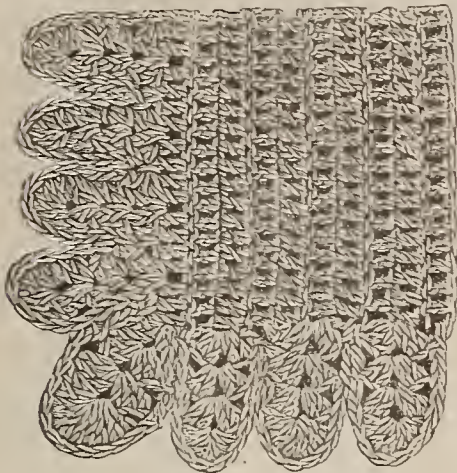
very good-naturedly responded to my re-
quest, inadvertently remarking at the
same time that he was glad to learn of the
article himself. One of them made and
tried will lead to the making of several
in any home. They become listed with

the indispensables when used in the sick-room. One always lies upon desk and typewriter table here ready to dispatch speedily the least venturesome fly.

ELLA HOUGHTON.

BABY AFGHAN.

A very simple and pretty afghan for a baby's cab is made of white eider-down lined with light blue or pink China silk, and finished with a crocheted border in saxon of four rows of shells, four double stitches to a shell, with a chain of two



between each two stitches of the shell. Around the edge is a row of shells in color to match the silk; this is finished in crocheted-silk the color of the lining. Fasten a chain of three stitches all along the edge and up and down between the shells, as seen in the illustration. If preferred, the center can also be crocheted of cream-white wool, like the illustration, which looks well over a silk lining. M. E. S.

GROWING OLD.

It is always a tragedy to a woman when she finds her first gray hair. Somehow it seems to her to mark the outmost boundary line of her youth, and it brings home to her for the first time the poignant pain of realizing that she, too, is mortal, and that the relentless march of time is not to be stayed for her. She is growing old. In that is all the bitterness of the long years to come, for, say what you will, "it is the waning, not the crescent moon, and old age is still old age."

It is the custom to ridicule those who ape youth after it is gone. We laugh at the woman who paints false roses on cheeks where the real ones have long ceased to bloom, and who covers up her grizzled locks under artificial frizzes, but surely there is a pathos as well in this desperate and unavailing clinging to a vanishing and illusive past. It is in vain that we point out the beauty of the ripened grain and the mellow softness of the autumn to one who can only see charm in the roses of spring. And ah me, the spring is so short!

Perhaps it is this transition period between the first gray hair and the whitened locks that is so full of regret. After one has made up one's mind to be frankly middle-aged and ceases imitating youth, one has robbed the situation of its bitterness, and can begin to enjoy some of its perquisites. At no other time in life do men enjoy such an advantage over women as in the matter of growing old. No unwritten tradition compels them to keep up the fiction of youth long after they have ceased to possess the fact. They do not need to cover up their honest baldness with frivolous curls, or to preserve the waist measures of the twenties, long after they have acquired the avoirdupois of the forties.

It is a little curious that as much as we all object to growing old individually, there are none of us so dull as to be blind to the beauty of old age. It would be a hard and cruel world if it were peopled only by the young, and crude with crudeness of ignorance and inexperience. We have the phrase as "tender-hearted as a child," but in reality nothing is so hard and cruel as youth. Its judgments are inexorable. It confounds the sinner and the sin. It is impatient and implacable. Only after one has lived and suffered, and has known the temptations and trials of life, does one learn to deal gently with the weaknesses and faults of his brother man, and to throw about the world the tender and enveloping mantle of charity and sympathy.

Surely this broader comprehension and sympathy is some compensation for growing old. To it may be added the fact—not always appreciated—that as one grows older one enjoys with a cultivated sense many things of which youth is profoundly

ignorant. The young devour all pleasures with the indiscriminating appetite of the farm laborer. The older person chooses warily, as an epicure selects among the dishes of a feast. Perhaps the panorama of life is not less beautiful to the old than the young. Only the picture is changed. It is no longer a gaudy chromo, but an etching.—New Orleans Picayune.

KNITTED QUILT.

EXPLANATIONS OF TERMS USED.—K, knit; p, purl or seam; tog, together; p s s o, pass slipped stitch over; th o, thread over; n, narrow.

A handsome quilt knitted in strips is made as follows: Take No. 10 knitting-cotton (four-ply) and two coarse steel knitting-needles, cast on 16 stitches, knit across plain 3 times.

First row—K 4 plain, then throw thread over each time you knit the next 8 stitches, k 4 plain.

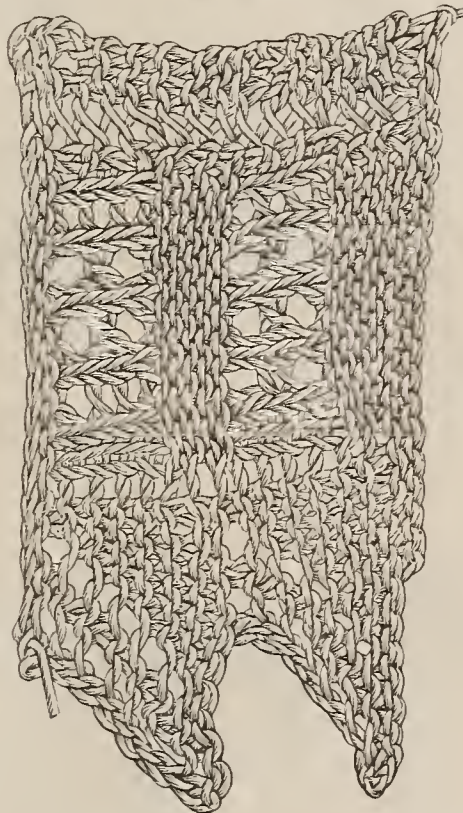
Second row—K 4 plain, p 16, k 4 plain. Third row—K 4 plain, p 2 tog, p 12, then p 2 tog, twisted (this is made by putting the needle into the back part of the stitch from the left side), k 4 plain.

Fourth row—K 4 plain, slip 1, k 1, p s s o, k 10 plain, k 2 tog, k 4 plain.

Fifth row—K 4 plain, p 2 tog, p 8, p 2 tog, twisted, k 4 plain.

Sixth row—K 4 plain, slip 1, k 1, p s s o, k 6 plain, k 2 tog, k 4 plain.

You will now have 16 stitches left. Begin again at the first row. Continue this pattern until you have made the desired length of the strip. Twenty-two strips make a good-sized quilt, but more strips may be added if desired. It is best to knit rather loosely, but not too loose. When you have made all the strips you want, sew them together, being careful to



have the scallops of each strip exactly opposite each other.

EDGE FOR QUILT.—Cast on 21 stitches, knit across plain.

First row—Slip 1, k 2, th o, n, k 10, th o, n, th o, n, th o, n.

Second row—Th o, k 6, p 10, k 1, th o, n, k 2.

Third row—Slip 1, k 2, th o, n, k 1, th o, n 4 times, k 1, th o, n, k 1, th o, n, th o, n.

Fourth row—Th o, k 7, p 12, th o, n, th o, n.

Fifth row—Slip 1, k 2, th o, n, k 1, th o, n, k 4, th o, n, k 1, th o, n, k 2, th o, n, th o, n.

Sixth row—Th o, k 8, p 10, k 1, th o, n, k 2.

Seventh row—Slip 1, k 2, th o, n, k 1, th o, n 4 times, k 1, th o, n, k 3, th o, n, th o, n.

Eighth row—Th o, k 9, p 10, k 1, th o, n, k 2.

Ninth row—Slip 1, k 2, th o, n, k 10, th o, n, k 4, th o, n, th o, n.

Tenth row—Th o, k 21, th o, n, k 2.

Eleventh row—Slip 1, k 2, th o, n, p 10, th o, n, k 5, th o, n, th o, n.

Twelfth row—Th o, k 22, th o, n, k 2.

Thirteenth row—Slip 1, k 2, th o, n, p 10, th o, n, k 6, th o, n, th o, n.

Fourteenth row—Cast off 6, k 16, th o, n, k 2. MRS. J. R. MACKINTOSH.

I contracted a severe cold, which caused me to cough continuously. Jayne's Expectant gave me instant relief, and speedily effected a permanent cure.—DAVID L. BARKEE, Deputy, Indiana, Oct. 4, 1895.

For constipation, take Jayne's Painless Sanative Pills.

FRUIT DESSERTS—APPLES.

1. Apple Pie.
2. Stewed-apple Pie.
3. Apple Dumplings.
4. Apple Sauce.
5. Apple Tapioca Pudding.
6. Apple Roley-poley.
7. Apple Cream.
8. Bird's-nest Jelly.

Apples are a universal favorite, not only because they are plentiful and consequently cheap and attainable, but also because they are a very healthful and pleasant fruit.

The Greening is, perhaps, the most to be desired for cooking purposes, although many other varieties are perhaps just as good. It is well, however, to select for cooking apples which are slightly tart, as they impart a more decided and pleasing flavor than the sweeter and sometimes insipid-tasting apple.

APPLE PIE is the household pie, if any particular kind of pie can be called such. Line your pie-plate with crust; mix one half salt-spoonful of salt, one salt-spoonful of cinnamon, one half cupful of sugar and the grated rind of one half lemon; sprinkle half of this mixture on the paste, then pile in your thinly sliced (and of course pared) apples until the dish is heaped. Now sprinkle the remainder of the before-mentioned mixture in with the heaped apples, place on the upper crust, not forgetting to first make the slashes and fork-prickings in same, and press the two crusts together at the edge with the tines of a fork.

STEWED-APPLE PIE.—While perhaps not liked as well by many as the fresh-apple pie, it serves its purpose very well, inasmuch as some kinds of apples are not always adapted to the first recipe, and would be all right stewed for apple pie. Line your plate with crust, place a clean cotton cloth on the same, and then a second, or upper, crust laid lightly on top of the cloth; then bake. Stew your pared, cored and sliced apples in a granite or porcelain k 1, being careful that they do not burn. When soft, sweeten same, and add a tiny pinch of salt, adding spice also if desired. When your crusts have baked sufficiently, take off the upper crust, and place the above apple mixture in same, and replace the crust. Many housewives prefer to press the stewed apples through a sieve, before putting same into the pie-crust, but this is a matter of opinion only.

APPLE DUMPLINGS.—Pare and core some tart ripe apples. Mix a crust consisting of one large teaspoonful of baking-powder to each pint of flour, well sifted together, and sweet milk enough to form a soft dough, also add a pinch of salt; roll out one thin crust for lining the sides and edge of a baker, put in the apples, adding a little water, cover with a crust one half inch thick, and steam for an hour. Serve with sauce made of sugar and butter creamed together and flavored with extract of orange, lemon or vanilla.

This can be made into small dumplings and steamed, many preferring this latter way of preparing apple dumplings.

APPLE SAUCE AND MERINGUE.—While not exactly a dessert, still apple sauce is a very agreeable dish to serve, not only as a side dish at a dinner, but also as a sort of staple dish at tea, especially for the latter when served with a meringue. To make plain apple sauce, core and slice some tart apples; stew in water enough to cover them until they break into pieces; beat to a pulp with a good lump of butter and plenty of sugar, with spice if desired; strain through a sieve, and serve cold.

For apple meringue beat in your apple sauce, after it has been sweetened and spiced, two or three eggs; pour into a pudding-dish, and bake quickly. When well crusted over, cover with meringue made by whipping the whites of three eggs with a little sugar; shut the oven door, and brown slightly. This latter is a pleasant variation of the plain apple sauce.

APPLE TAPIOCA PUDDING.—Plain tapioca pudding is always well liked, and apple tapioca is not less so. Soak a cupful of tapioca in enough boiling water to cover it; when it is quite soft, stir in three beaten eggs, two tablespoonfuls of sugar, and add one quart of milk, also a little salt. Have your pudding-dish filled with pared and cored apples; stir the mixture well, and pour over the apples; bake, and eat with cream and sugar.

APPLE ROLEY-POLEY is a popular dish with the children. Roll out one half inch thick a paste made of finely chopped suet,

flour and water and a little salt; spread over it thinly sliced apples, sprinkle a little flour over them, and also sugar, and add little bits of butter and spice if desired. Roll up; pinch the ends tight, and tie in a cloth which has been wet with cold water and floured; steam one or two hours, according to size.

APPLE CREAM.—Peel and core five large apples; boil them in a little water until soft enough to press through a sieve; sweeten, and beat with them the whites of five eggs. Serve with cream poured around it. This is also a slight variation of plain apple sauce, and if beaten well is very delicious.

BIRD'S-NEST JELLY.—Peel and core carefully six apples, cover closely the bottom of a jelly-dish, and fill the cores with sugar, and bake until the apples are soft, and tender. Soak one half package of gelatin one half hour in one half pint of cold water, and then add one pint of hot water to dissolve it; sweeten and flavor to taste. When it begins to thicken, pour the whole over the soft apples, and set in a refrigerator to cool and harden. Serve with grated nutmeg, sugar and cream or with whipped cream.

The various ways for cooking apples are so well known because of the plentifulness of the fruit that doubtless some of the above recipes, though carefully collected from different sources, may not be new to all. It is to be hoped, however, that a few of them will be a pleasant variation to some housewives' mode of preparing this fruit. EMMA LOUISE HAUCK.

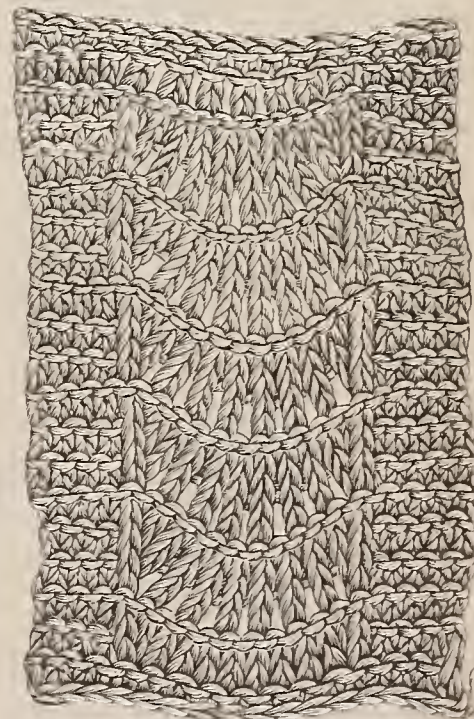
CREAMS.

These can be prepared early in the morning, and be ready for tea.

As blanched almonds are used for many things, it will be well to give the process:

Buy your almonds already shelled; throw them into hot water to remove the skins. As you remove them put them on a dry towel to absorb the moisture, after rinsing them.

ALMOND CHARLOTTE.—First soak half a package of gelatin in half a pint of water for two hours; strain before using. Take a cupful of finely chopped blanched almond meats. Put three tablespoonfuls of sugar in a pan over the fire, and when it melts, stir in the nuts until they become brown; remove from the fire, and when cold, roll fine. Put into your double boiler one and one half cupfuls of milk and the rolled nuts, place over the fire, and stir in lightly the well-beaten yolks of two eggs, three fourths of a cupful of sugar; when it boils, set to one side, and gradually stir in the gelatin; remove from the fire, set in cold water, and heat until it begins to thicken; then beat in two quarts of whipped cream, stir to keep it from settling until it begins to thicken, then turn into a mold, and set in a cool place.



DEVELOPED ALMONDS.—Blanch fine, large almonds when dry, then throw them into some smoking-hot olive-oil in a frying-pan; when of a pale golden color, skim out, and put upon a cloth sprinkled with salt and a very little coralline pepper; toss about a little, and when cool they are ready to serve. Use the same dish as you would for olives.

JELLY CREAM.—Beat the whites of four eggs to a stiff froth, add two tablespoonfuls of sugar, two of currant jelly, one of red-raspberry jam; place upon ice until ready to serve. Serve with sponge-cake or lady-fingers. BELLE KING.

Our Household.

TO A SWEET-PEA.

Sweet little flower, who cares to sing thy praise?
Who crowns thee with the gem of glowing words?
Thou'rt but a simple thing of every day,
Familiar as the myriad-numbered birds.

Thou canst not match the lily's purity;
The royal rose bedims thy utmost glow;
And far Japan has sent her fairest queen
To bid thee bow thy head and bend it low.

Thou'rt built of common earth; no royal blood
Flows richly through thy humble, peasant veins;
Not thine the palace, better thou shouldst keep
Thy lowly place beside the village lanes.

And yet, sweetheart, thou hast a fairer place
Than princely blood or grace could give to thee—
A quiet resting-place in gentle hearts
That love thee for thy sweet simplicity.

Let high-born flowers contend to win the crown;
Let nobles strive to seat them on the throne;
Do thou, sweet flower, in quiet, fragrant peace,
Possess the loving hearts that are thine own.

—Chas. I. Junkin.

A LEMON SYMPOSIUM.

"Isn't that rich!" exclaimed one of the company, holding toward the light a glass of egg lemonade.

"Yes, and tastes as good as it looks, besides being more wholesome than coffee," replied the doctor's wife.

Our hostess was besieged for the recipe. "Make plain lemonade," said she, "then add beaten eggs, whites and yolks together; one egg to three glasses is a good proportion. Be sure to add the egg last," she cautioned, rising to pass the cheese crackers again, "otherwise the acid will curdle it." A dozen of us, members of the Wednesday Afternoon Reading Club, were seated in a cozy parlor partaking of the usual light luncheon.

It is a fact never openly acknowledged that we grow a bit inattentive toward intermission and cast furtive glances at the clock, wondering between names and dates what the fare will be. And when the president formally announces, "It is recess, ladies," books and needlework are dropped with alacrity and tongues fly, for "we sit to chat as well as eat." During the ten years of our existence we have traveled in many lands and learned of many people through the world's best writers, but have also stored lore of quite a different sort. We number old housekeepers, young housekeepers and prospective housekeepers, and the practical lessons of home-making given and taken over our cups alone justify the union.

Cookery is the most frequent home topic, and at the meeting in question the egg lemonade started the domestic discussion. Our youngest, a bride of six months, wanted to know how to select lemons, having had such poor luck buying; they were sure to be dry or bitter. "My experience," said an older member, "has taught me to avoid those light in weight and that have thick rinds, resisting pressure. A good, juicy lemon is heavy, soft and thin-skinned."

"And how is the best way to keep them?" continued the bride.

"What do you want to keep them for?" interrupted another. "Lemons are to use, the more the better."

"But suppose one lives ten miles from a lemon?" said our president. "Even here by a good market it pays to get a quantity against the season of high prices. I couldn't afford them all the year otherwise. If wrapped separately in tissue-paper and kept in a cool place they will remain fresh a long time. Another method is to immerse them in a jar of water; a cool location and a daily change of water are essential."

"But I dread using lemons," said a young housekeeper; "it's so much trouble to get the parts you want and not get what you don't want."

"Oh, that's easy enough," said the bride. "Grate what you want of the peel, then use a squeezer, one that separates the juice from the seeds; those made of glass or wood are preferable to metal ones."

"I know that is considered the way

now," observed an elderly member, "but I think a lemon well rolled and squeezed by hand furnishes better-flavored juice, for the reason that the skin is not subjected to pressure sufficient to extract its flavor also. Straining through a cloth frees from seeds and bits of fiber."

"I'm a regular interrogation-point this afternoon," said the bride, "but I wish some one would tell me just how to make common, plain lemonade."

"The juice of half a lemon and one teaspoonful of sugar to one glassful of water is a good proportion," replied our hostess. "A little grated peel gives a rich flavor, but should be added just before using, otherwise the beverage will be bitter. I frequently use lemons for garnishes. Divide a slice into four pointed sections, and use with salads and similar dishes; alternating with parsley gives a pretty effect."

"Lemons are so medicinal, too," remarked one who was with us after long absence. "Lemon-juice and hot water cured me of nervous dyspepsia, and there's nothing better for rheumatism. Take a cupful of hot water and juice of one fourth of a lemon, without sugar, half an hour before meals and at bedtime."

"Yes, and they are excellent for toilet purposes," added another. "Just look at my hands. I do my work, but they're white and smooth. I save remnants and rub upon them to remove stains, and at night use a mixture of lemon-juice and glycerine."

Our white-haired, eldest member had said nothing, when some one moved that she tell all she knew about lemons.

"I was thinking," said she, "what a long line there would be if all the lemons I've used could be placed in a row. I've kept house many years and reared a large family, and one of my best allies has been the lemon. Flax-seed tea added to lemonade sweetened with honey I've used with excellent effect for a cough or a cold; and for an obstinate cough the continued use of lemon-juice and glycerin, equal parts, is curative; much better than the glycerin and rum preparation, I think. For hoarseness and croup try loaf-sugar thoroughly saturated with the hot juice from a roasted lemon."

"The juice of a lemon and one and one-half pints of clear oatmeal gruel sweetened to taste make a nutritious and palatable food. A thin slice of lemon, a little of the juice and an extra lump of sugar added to a cupful of iced tea make a refreshing drink. Those unable to take vinegar can substitute lemon-juice; it is particularly savory with baked beans. Iron rust can be removed with a mixture of lemon-juice and salt; also mildew. After applying place the article on grass or snow in the sun."

"Lemon-juice will whiten frosting, and improve its consistency and flavor."

"It's past time to begin the second reading," said the president. "I hoped to finish the *Odyssey* to-day. Poor Penelope's been kept up-stairs weaving and raveling and crying long enough; it's time her suspense ended. For my part, I think Ulysses could have gotten back in fewer than twenty years, notwithstanding his mishaps. He was too well entertained with roast pig and wine and things to hurry home. Mrs. Gordon, will you begin?"

HELEN HUNTINGTON BULLARD.

TESTED RECIPES.

DEVIL'S FOOD.—Part first.

- 1 cupful of light brown sugar,
- $\frac{1}{2}$ cupful of butter,
- 2 cupfuls of flour,
- $\frac{1}{2}$ cupful of sweet milk,
- 3 yolks of eggs,
- 1 teaspoonful of soda sifted in flour.

Part second.

- 1 cupful of grated chocolate,
- 1 cupful of light brown sugar,
- $\frac{1}{2}$ cupful of sweet milk.

Set on the back of the stove to dissolve, but do not let it boil; take off when dissolved, and let cool, and then stir into first part. Use the flour after you have put in part second.

CREAM PUFFS.—One pint of water and one half pound of butter boiled together; while boiling stir in three fourths of a pound of flour; let it thicken on the fire; when cold, add one teaspoonful of cold water and ten eggs, stirring in one at a time without beating, then drop on tines some distance apart and two inches in diameter; bake in a very quick oven twenty minutes.

IVORY SOAP

Have you never taken a bath with Ivory Soap? You have missed a luxury. The smooth creamy lather is soothing and refreshing. IT FLOATS

FOR THE CREAM.—

- 2 cupfuls of sugar,
- 4 cupfuls of milk,
- 3 eggs.

Boil the milk, beat the eggs well, add sugar and a little flour, and stir this mixture into the milk while boiling; let it just scald, stirring constantly; take from the fire, and when cool, make a slight incision in the puffs, and fill with cream. The secret of having them puff lies in not beating the eggs at all, and stirred just enough to make smooth.

SCRIPTURE CAKE.—

- 1 cupful of butter, Judges v. 25;
- $3\frac{1}{2}$ cupfuls of flour, I. Kings iv. 22;
- 2 cupfuls of sugar, Jeremiah vi. 20;
- 2 cupfuls of raisins, I. Samuel xxx. 12;
- 2 cupfuls of figs, I. Samuel xxx. 12;
- 1 cupful of water, Genesis xxiv. 17;
- 1 cupful of almonds, Genesis xliii. 11;
- Little salt, Leviticus ii. 13;
- 6 eggs; Isaiah x. 14;
- 1 large spoonful of honey, Exodus xvi. 31;

Sweet spices to taste, I. Kings x. 2.

Follow Solomon's advice for making good boys, and you will have a good cake. Prov. xxiii. 14. Sift two teaspoonfuls of baking-powder in the flour; pour boiling water on the almonds to remove the skins, seed raisins, and chop figs. Makes one large or two small cakes.

APPLE PUDDING.—Pare and slice fine three or four good cooking-apples in a baking-dish, put over them sugar enough to sweeten, one cupful of flour, work a little butter and a little salt through the flour and one teaspoonful of baking-powder, stir up with sweet milk to make a thin batter; pour over the apples and bake one half hour. Serve with cream and sugar.

RUBY.

RENOVATING OIL-STOVES.

Our three kerosene-stoves have done us good service for five summers, and often one has been called into requisition to help get a hurried and early breakfast at other seasons of the year. But one was absolutely of no use, and the other two so shaky and worn that cleaning them and putting in new wicks did little good. However, the rackets were in order, and as my pocket-book was low, somehow, these two stoves must be made to serve us for this summer. I should put them in order as soon as possible.

Meantime Philetus worried my very soul by insisting on lighting them after they had been given up for the time being, even going so far as to drag them out of the obscure shelter of the bottom of the red cupboard, and insisting on their use to hurry up the coffee. To understand the state of mind in which he does this, remember he is a New Jersey commuter half a mile from the station.

When one bright spring morning he peeped into the kitchen and saw the two victims of his iconoclastic furies getting breakfast, and going about the work in good style, no smoke, no odor, no sputtering—new stoves could not have done the work better, although they might have been prettier to look at—

"Good gracious, Polly!" said Philetus, much subdued, "what have you done to the stoves?"

"Cleaned them up and given them a chance to show their metal."

"Look all right now," he ventured, doubtfully.

"Yes, and they've been going that same way for a week. The best of it is we needn't buy oil-stoves this summer."

Philetus smiled genially, . . . his breakfast, departed, and straightway forgot what manner of thing an oil-stove was.

Shall I tell the tale of their renovation? For several days I saved the water in which potatoes had been boiled, and putting the stoves into a kettle sufficiently

large to hold one at a time, covered each with potato-water, and boiled them well. Then each was scoured, using a little scouring-soap, and dried.

Next day, having saved the first waters off stewed pie-plant, I boiled the stoves again in this sour, vinegar-like liquor.

I boiled the new wicks separately in pie-plant water, adding a little salt.

The stoves have been working well all summer. One is now giving out in the rackets, and I shall sell it for old iron this fall. I shall need to spend no money for oil-stoves until early next spring.

FLORENCE BARKER.

A CORN CHAPTER.

When corn is in season you will enjoy trying these recipes to vary the daily bill of fare:

CORN OYSTERS.—

- 6 ears of grated sweet corn,
- 3 well-beaten eggs,
- 1 tablespoonful of melted butter.

Stir into a batter, and season to taste. Use part lard and part butter when frying, have it sizzling hot when you place the oysters in to fry. Make them of one tablespoonful of the batter. Garnish with parsley when served.

CORN OMELET.—First part corn—Four ears of sweet corn thinly cut from the cob and then the juice scraped off, add a little milk or cream, and cook for a few minutes until done; butter and season to taste.

Second part omelet—Separate yolks and whites of four eggs, add one cupful of milk to the well-beaten yolks, one teaspoonful of corn-starch and the whites whipped to a froth, and add the corn. Put a small piece of butter into your frying-pan; when warm, pour in your omelet, gently move it when it begins to set, with a silver fork held upright in it; when brown on the under side, loosen from the pan, fold over one half, and slide it out onto a platter. Do not put it into too hot a pan at first, and never leave it a moment until it is on the table.

BAKED CORN.—Eight ears of grated sweet corn, four well-beaten eggs, one tablespoonful of corn-starch, one tablespoonful of sugar, pepper and salt to taste; put into a buttered baking-dish, cover with fresh milk, and bake in a slow oven for thirty minutes. The addition of a little sugar to all cooked corn is a great improvement to it.

CORN ON COB.—Drop this into boiling water, and cook ten minutes. Do not put salt into the water, as it spoils the appearance of it.

REX.

ASTHMA AND HAY-FEVER CURE.—FREE.

A sure specific cure for Asthma and Hay-fever is found in the Kola Plant, a new botanical discovery from the Congo River, West Africa. Many sufferers report most marvelous cures from its use. Among others, Mr. Alfred C. Lewis, Editor of the *Farmer's Magazine*, and Rev. J. L. Combs, of Martinsburg, West Va., were completely cured by the Kola Plant after thirty years' suffering. Mr. Lewis could not lie down at night in Hay-fever season for fear of choking, and Mr. Combs was a life-long sufferer from Asthma. Hon. L. G. Clute, of Greeley, Iowa, writes that for eighteen years he slept propped up in a chair, being much worse in Hay-fever season, and the Kola Plant cured him at once. It is truly a most wonderful remedy. If you are a sufferer you should send your address to the Kola Importing Co., 1164 Broadway, New York, who to prove its power will send a Large Case by mail free to all who need it. All they ask in return is that when cured yourself you will tell your neighbors about it. It costs you nothing and you should surely try it.

\$100 IN CASH PRIZES.

The winners in the August prize contest will receive a \$100 bicycle and \$100 in cash as prizes. There are six prizes. See page 19 for full particulars.

40 Cent Patterns for 10 Cents

These patterns retail in fashion bazaars and stores for twenty-five to forty cents each, but in order to increase the demand for our paper among strangers, and to make it more valuable than ever to our old friends, we offer them to the lady readers of our paper for the low price of only 10 Cents Each.

Full descriptions and directions—as the number of yards of material required, the number and names of the different pieces in the pattern, how to cut and fit and put the garment together—are sent with each pattern, with a picture of the garment to go by. These patterns are complete in every particular, there

being a *separate pattern for every single piece of the dress.* All orders filled promptly.

For ladies, give **BUST** measure in inches. For **SKIRT** pattern, give **WAIST** measure in inches. For misses, boys, girls or children, give both **BREAST** measure in inches and age in years. Order patterns by their numbers.

Satisfaction guaranteed or money refunded.

To get **BUST** and **BREAST** measure, put the tape measure **ALL** of the way around the body, over the dress close under the arms.

Special price of each pattern, 10 cents.

Postage one cent **EXTRA** on skirt, tea-gown and other heavy patterns.



No. 7137.—MISSSES' BLAZER. 10 cents.
Sizes, 12, 14 and 16 years.

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Sizes, 12, 14 and 16 years.



No. 7118.—INFANTS' LONG COAT, WITH
CAPE AND HOOD. 10 cents.



No. 7033.—BOYS' COSTUME. 10 cents.
Sizes, 2, 4 and 6 years.



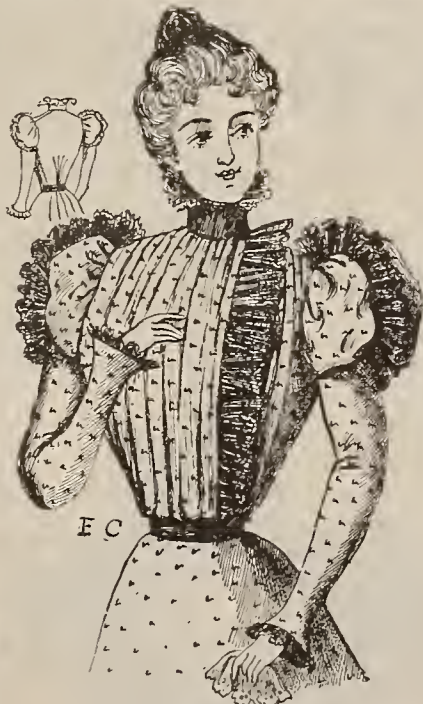
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10 cents.
Sizes, 22, 24, 26, 28 and 30 inches waist.



No. 7107.—INFANTS' ROBE, WITH ROUND,
SQUARE AND POINTED YOKES. 10c.



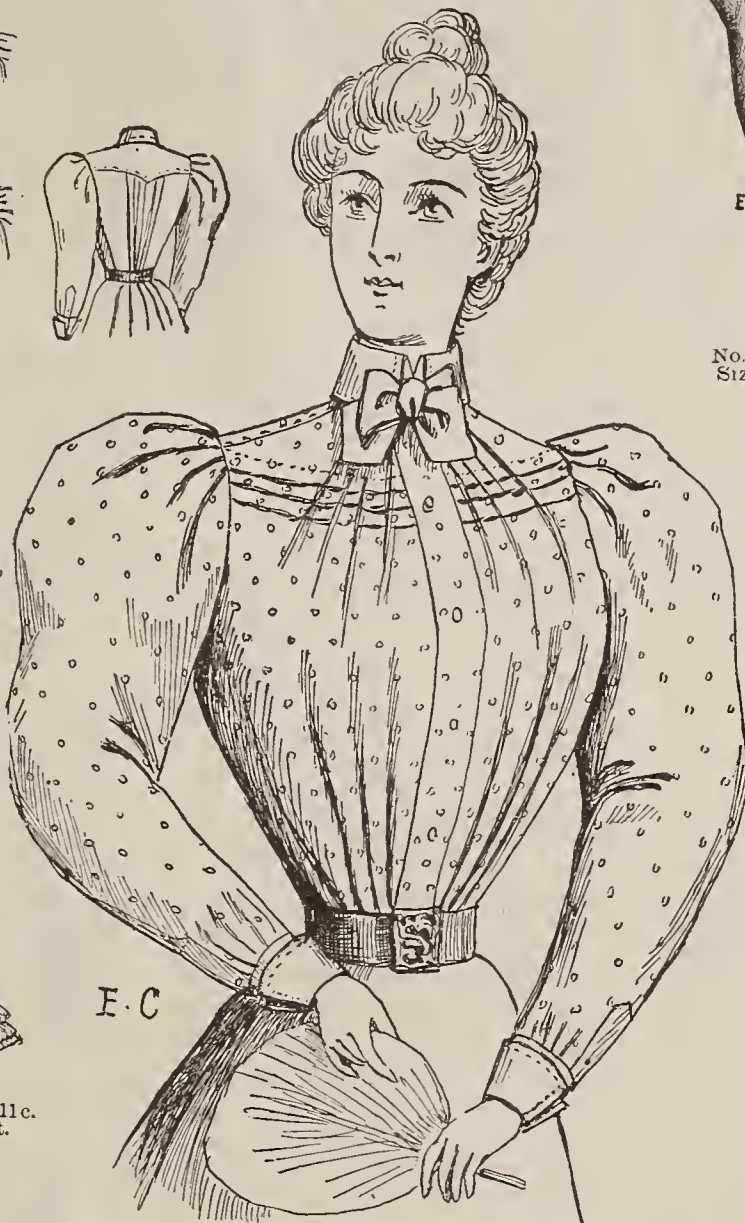
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Sizes, 22, 24, 26, 28 and 30 inches waist.



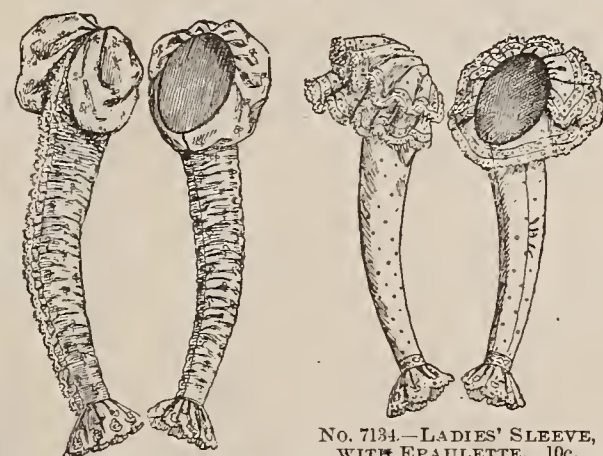
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Sizes, 32, 34, 36, 38 and 40 inches bust.



No. 7117.—INFANTS' CAMBRIC SKIRT.
10 cents.



No. 7089.—LADIES' SHIRT-WAIST, WITH TUCKED FRONT. 10 cents.
Sizes, 32, 34, 36, 38 and 40 inches bust.



No. 7126.—LADIES' SLEEVE.
10 cents.
Sizes, 32, 36 and 40 inches
hust.



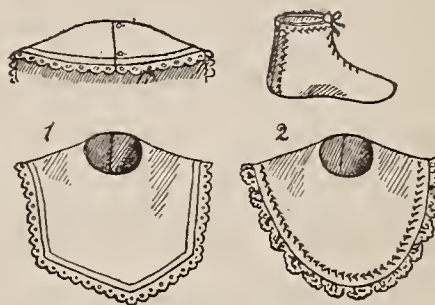
No. 7101.—LADIES' BOLEROS. 10 cents.
Sizes, 32, 34, 36, 38 and 40 inches bust.



No. 7125.—LADIES' ETON JACKET. 10c.
Sizes, 32, 34, 36, 38 and 40 inches bust.



No. 7046.—GIRLS' DRESS, WITH
HIGH OR LOW NECK. 11c.
Sizes, 6, 8, 10 and 12 years.



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10 cents.



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Sizes, 12, 14 and 16 years.
No. 7060.—Same Pattern—Ladies' Size.
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MISSSES' SUNBONNETS.
The two patterns for
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Cut in two sizes—
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NOTICE.—Send all orders for patterns direct to our central office, to FARM AND FIRESIDE, SPRINGFIELD, OHIO, where our stock of patterns is kept.

Our Sunday Afternoon.

ONE DAY AT A TIME.

One day at a time! That's all it can be;
No faster than that is the hardest fate;
And days have their limits, however we
Begin them too early and stretch them too late.

One day at a time!
It's a wholesome rime!
A good one to live by—
A day at a time.

One day at a time! Every heart that aches
Knows only too well how long that can
seem:

But it's never to-day which the spirit breaks:
It's the darkened future, without a gleam.

One day at a time! A burden too great
To be borne for two can be borne for one;
Who knows what will enter to-morrow's
gate?

While yet we are speaking all may be
done.

One day at a time! When joy is at height—
Such joy as the heart can never forget—
And pulses are throbbing with wild delight,
How hard to remember that suns must set.

One day at a time! But a single day,
Whatever its load, whatever its length;
And there's a bit of precious Scripture to say
That, whatever to each, shall be our
strength.

One day at a time! 'Tis the whole of life:
All sorrow, all joy, are measured therein,
The bound of our purpose, our noblest strife,
The one only countersign, sure to win!

One day at a time!
It's a wholesome rime,
A good one to live by,
A day at a time.

—Helen Hunt Jackson.

THIS IS HOW THEY RISE.

A YOUNG woman found employment in a queensware-store. She immediately began a course of study in her leisure moments upon glassware and china. Then she read some recent works upon the appointments of the table, and in a short time, by applying herself to her business, became the most valuable employee in a large store.

In a millinery establishment the young woman who found time for reading a book or two on colors and their harmonious combination, found her own taste greatly improved and her ability to please patrons much greater. She was soon a favorite with the employers and customers.

The young woman who, to earn an honorable living, went into a lady's kitchen, and instead of gossiping every evening found time to read a few good books and household papers, was soon too valuable a housekeeper to be kept in a subordinate position in the kitchen; she knew how a table should look for a formal dinner, she knew what dishes were in season, she knew how to serve a meal in its proper course, and more than that, she knew something about the food value of different dishes.

Of course, this sounds like an old-fashioned Sunday-school book, but the fact remains that there is always "room at the top," and that no unusual amount of intelligence is needed to reach the top. A fair average of good sense and a proper amount of application will accomplish everything.

SIXTY SECONDS MAKE A MINUTE.

Why is an hour divided into sixty minutes, each minute into sixty seconds, etc.? Simply and solely because in Babylonia there existed, by the side of the decimal system of notation, another system, the sexagesimal, which counted by sixties. Why that number should have been chosen is clear enough, and it speaks well for the practical sense of those ancient Babylonian merchants. There is no number that has so many divisors as sixty. The Babylonians divided the sun's daily journey into twenty-four parasangs, or seven hundred and twenty stadia. Each parasang, or hour, was subdivided into sixty minutes. A parasang is about a German mile, and Babylonian astronomers compared the progress made by the sun during one hour at the time of the equinox to the progress made by a good walker during the same time, both accomplishing one parasang. The whole course of the sun during the twenty-four equinoctial hours was fixed at twenty-

four parasangs, or seven hundred and twenty stadia, or three hundred and sixty degrees. This system was handed on to the Greeks, and Hipparchus, the great Greek philosopher, who lived about 150 B. C., introduced the Babylonian hour into Europe. Ptolemy, who wrote about 150 A. D., and whose name still lives in that of the Ptolemaic system of astronomy, gave still wider currency to the Babylonian way of reckoning time. It was carried along on the quiet stream of traditional knowledge through the middle ages, and, strange to say, it sailed down safely over the Niagara of the French revolution; for the French when revolutionizing weights, measures, coins and dates, and subjecting all to the decimal system of reckoning, were induced by some unexplained motive to respect our clocks and watches, and allowed our dials to remain sexagesimal; that is, Babylonian, each hour consisting of sixty minutes. Here we see again the wonderful coherence of the world, and how what we call knowledge is the result of an unbroken tradition of a teaching descended from father to son. Not more than about a hundred arms would reach from us to the builders of the palaces of Babylon and enable us to shake hands with the founders of the oldest pyramids and to thank them for what they have done for us.—Max Muller.

PLENTY TO EAT.

When at its zenith, the Roman empire laid all the barbaric countries of the world under contribution to supply the tables of its nobles and wealthy citizens with the fine luxuries of life. Asia and Africa poured in the rich spices and fruits of the tropics; Germany and the great north countries raised the grains and wild berries; Italy and the fertile land of the Franks cultivated the vineyards to make or express the wines; every strip of sea-coast from the Mediterranean to the Baltic contributed its quota of fish; and the forests of Brittany yielded the wild game of the woods—birds, beasts and fowls—for the banquets of the proud, dissolute rulers of the vast empire. With the choice products of a great world so easily obtained, there were wanton waste, foolish extravagance and a strange disregard of the value of expensive luxuries, and the historian dwelling upon these times delights in recapitulating the various articles of diet arranged in tempting manner upon the groaning tables at the great feasts and banquets.

But, excepting Nero's dish of peacock tongues and Cleopatra's cup of wine with the dissolved pearls in it, the menu of our modern banquets would compare favorably with those spread in the times when gluttony, licentiousness and greed for luxury were insidiously sapping the strength of Rome.—George E. Walsh, in Lippincott's.

ISLANDS OF NEWS IN OCEANS OF INK.

W. W. Canfield, city editor of the Utica "Observer," delivered an address on the evening of February 11th on the subject "Islands of News in Oceans of Ink." From first to last the address was a denunciation of sensational newspapers. By several examples he showed how the real news was often covered up in articles padded and lengthened out with needless and senseless gush. He pointed out the fact that the people who read the sensational papers are not well informed, for the reason that they are furnished so many fakes in connection with the news that they do not know which is false and which is true. People who buy and read these papers under the idea that they contain more news than other journals generally read a lot of trash which is much worse than any news.—The Writer.

AIR AND ATHLETICS.

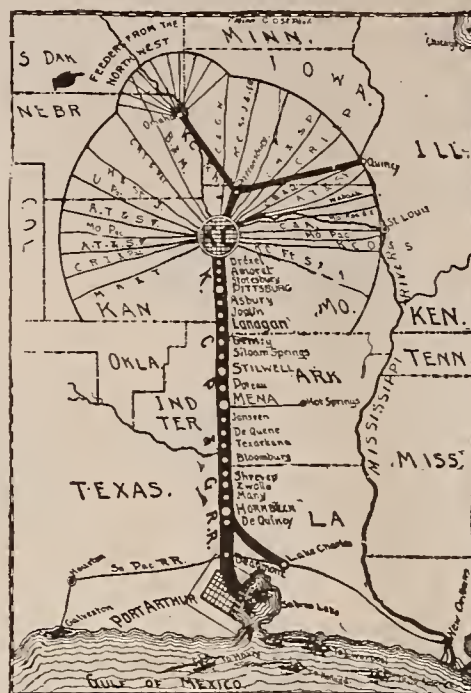
What a man of to-day needs most is not athletics in a gymnasium, but plenty of fresh air in his lungs. Instead of a quantity of violent exercise that leaves him weak for several hours afterward, he needs to learn to breathe right, stand right and sit right. And if the woman who spends so much time and strength getting out into the air would dress loosely, breathe deeply, and get the air into her, she would have new strength and vigor, and soon be freed from many aches and pains and miseries.—Safeguard.

TRIAL FREE.

If you have rheumatism, try that simple remedy which cured me. Trial package and other information free. Address John A. Smith, Dept. H, Milwaukee, Wis.

HERE'S A NEW COUNTRY!

NEW HOPES! NEW OPPORTUNITIES!
LAND OF SUNSHINE AND—PLENTY!
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The building of the Kansas City, Pittsburg & Gulf Railroad, an air line from Kansas City to Port Arthur, has opened up a country in western Missouri and Arkansas and Louisiana that cannot be excelled as an agricultural and fruit growing country; good, healthy, sparkling springs and clear streams; where you can work out of doors 12 months instead of six.

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MUST HAVE AGENTS AT ONCE

to sell Sash Locks and Door Holders. Sample Sash Lock free for two-cent stamp. Immense; better than weights; burglar proof. \$10 a day. Write quick. Address BROTHARD & CO., Box 55, Philadelphia, Pa.

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Queries.

READ THIS NOTICE.

Questions from regular subscribers of FARM AND FIRESIDE, and relating to matters of general interest, will be answered in these columns free of charge. Querists desiring immediate replies, or asking information upon matters of personal interest only, should inclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query, in order that we may answer by mail if necessary. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

Alfalfa.—G. J. M., Mill Springs, Ky., and others. Send five cents to Superintendent of Documents, Union Building, Washington, D. C., for Farmers' Bulletin No. 33, "Alfalfa, or Lucerne." Alfalfa-seed can be obtained from nearly all seedsmen.

Dehorning Calves.—S. W. D., DeBord, Ky., asks: "What preparation is used to prevent the growth of horns on young calves?"

REPLY:—As soon as you can feel the "button," or horn-bulb, apply a little concentrated lye. Make the lye into a thick paste by adding a little water. Cover the "button" with the lye paste, being careful not to get it elsewhere on the calf's skin, or into its eyes. If by accident you get any of it where it will burn the skin, cover it with lard. Occasionally it is necessary to make a second application, when the work has not been properly done the first time.

Mushroom Culture.—J. B. P., Ilion, N. Y., writes: "In your June 15th issue there is a short article on mushrooms. I would like to inquire as to the average yield in weight that it would be reasonable to expect from a bed, say three feet by forty feet, from either the English or the French spawn, if all conditions were favorable, and which would yield the most. And as to price, what is the usual price of either or each kind?"

REPLY BY T. GREINER:—I would not put my expectations very high, for entire or partial failure in this is the rule, and success the exception. I have usually had best success with brick-spawn, which any seedsmen will sell you for from seven to twenty cents a pound. Some growers prefer the flake-spawn. By all means, however, send for a copy of the mushroom bulletin issued by the Department of Agriculture.

Canning Corn.—S. N., Walla Walla, Wash., writes: "Please give a thoroughly reliable recipe for canning sweet corn in glass jars."

REPLY:—Try the following method by a contributor to one of our exchanges, the "Indiana Farmer": "Shave a thin slice down the ear of the corn, and then with the back of the knife scrape out the pulp. Fill glass cans full of the corn, pressing it in with the small end of the potato-masher. It will take about a dozen large ears to fill a one-quart can. When the cans are full, screw cover on with thumb and finger—this will be tight enough; then place a cloth in the bottom of a wash-boiler, to prevent breakage. On this put a layer of cans in any position you prefer, over the cans put a layer of cloth, then a layer of cans. Fill the boiler in this manner, and then cover the cans well with cold water; place the boiler on the fire and boil three hours without ceasing. On steady boiling depends much of your success. After boiling three hours, remove the boiler from the fire, and when the water is cool enough, lift each can out, tighten the tops, and when cold, tighten again. Wrap each can in brown paper to exclude the light, and keep in a dry, cool, dark cellar."

Canning Corn, Green Peas, String-beans and Tomatoes.—In reply to A. C. S., Bremen, Ohio, and others. Mrs. H. S. C., Raymondsville, N. Y., writes: "Pick the corn when right for table use, cut from the cob, and fill glass cans, jamming it down until the milk comes out and you cannot get any more corn in the can. Put on the rubber, and screw on the cover as tight as possible. Place in a boiler of cold water, with a board under and a weight over to keep them in place, and boil three hours. Set off the stove and let the cans cool, being careful not to leave them in a draft, or the jars may crack. As soon as you can, tighten the covers. Set the jars in a dark, cool place. Shell peas, fill the jar, and then fill with cold water until the peas are covered. Put on rubbers and covers, and cook two hours in a boiler, the same way as the corn. Cut or break string-beans as you do for the table, fill the cans and cover with water, and cook two hours, the same as peas. Tomatoes can be canned whole or cooked. To can whole, peel, and put into the can whole or cut in two crosswise, fill with water, and cook one hour, the same as peas and beans. Or peel and cook the tomatoes same as for the table, fill the cans while hot and put on the rubbers and covers. I have tried both ways, and they have kept without any trouble. I have used all of these recipes, and know the vegetables will keep if directions are followed."

SIX GRAND PRIZES FOR AUGUST.

Our next contest closes August 31st. Surely no industrious boy or girl will let this opportunity to get a prize go by without trying for it. The contest is simple and easy to work out. See page 19 for full particulars.

VETERINARY.

Conducted by Dr. H. J. Detmers.

To regular subscribers of FARM AND FIRESIDE answers will be given through these columns free of charge. Where an immediate reply by mail is desired, the applicant should inclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Subscribers may send their veterinary queries directly to Dr. H. J. DETMERS, 1315 Neil Avenue, Columbus, Ohio. NOTE.—Parties who desire an answer to their inquiries in this column must give their name and address, not necessarily for publication, but for other good reasons. Anonymous inquiries are not answered under any circumstances.

Puerperal Paralysis.—J. W. M., Pottstown, Ill. Your cows died of puerperal paralysis, or so-called calving-fever, or milk-fever. Please consult recent numbers of this paper.

Bloody Warts.—M. F. V., Burk, Ark. If you will kindly describe what you call bloody warts, whether you mean bleeding excrescences (morbid growths on the surface of the skin), or bleeding ulcers with loss of substance, I may be able to comply with your request. If the "bloody warts" are ulcers with loss of substance and elevated borders, the case looks very suspicious, and it may be that farcy would be the proper name for the disease.

Hematuria.—E. A. E., Hollister, Cal. According to your statements your cow suffered from hematuria (bloody urine), and the drying up of the milk is only a necessary consequence. When this reaches you she is either dead or has recovered. As hematuria can be produced by several different causes, and as your letter does not give the least intimation of what may have happened, I cannot tell you what may have caused the disease in your case.

Probably Mange.—M. C. P., Westmont, N. J. Mange in dogs, although not incurable, is not easily cured, especially if already inveterate, and the treatment certainly is too much for a lady to undertake. Therefore, if the dog is a valuable one, and as there is a large number of good veterinarians in New Jersey, it will give you much more satisfaction to leave the treatment to a competent veterinarian; and if the dog is not worth the cost, it will be best to get a new dog.

Probably Been Pricked by a Nail.—J. A. W., Winslow, Ind. If the wound in your horse's foot, probably caused by being pricked with a nail, has not been closed when this reaches you, fully three weeks after you wrote your letter, I advise you to have the animal examined and treated by a veterinarian, because the changes that will have occurred in three weeks will have entirely changed the character of the lesion, and therefore may require an entirely different treatment.

Agalactia.—O. B. M., Adrian, Mich. It is highly probable that in your case the agalactia, or cessation of the secretion of milk, has been caused by feeding spoiled food, full of fungi and molds of various kinds, and it is to be expected that the production of milk will be gradually resumed as soon as the food is changed and nothing is fed but what is perfectly sound and uncontaminated with anything injurious. If a good pasture is available, it is advisable to let the cows have the benefit of it.

Snorting or Roaring.—M. E. C., Ringgold, Ohio. If what you call "snorting," a sound produced by healthy horses when excited, is "roaring," as indicated by one or two sentences of your letter, it must be concluded from the rest of your description that the sound is produced by an obstacle in the respiratory passages, possibly by the presence of a so-called polyp in one of the nasal cavities. Have the animal examined by a veterinarian, and if such growth is found and is accessible, have it removed by a surgical operation, which will be the only means by which it can be removed.

Goiter.—C. W. C., Gaylord, Mich. What you describe is a case of goiter, or, in other words, a morbid enlargement of the thyroid glands. The enlarged glands, it is true, can be removed by a surgical operation, but as this operation, even if performed by a skilled surgeon, is not without danger on account of the close proximity of the carotids, and the shortness and the comparatively great width of the arteries passing directly from the carotides into the thyroid gland, I cannot advise to have it performed, especially as the enlarged glands, although an eyesore, very seldom cause any damage. In some cases persistent applications once a day of iodine preparations—for instance, of an ointment composed of iodine of potassium, one part, and lard, six to eight parts, have effected a marked reduction.

Vomiting Shoats.—D. D. K., Princeton, Mo. All the information you give is comprehended in the following: "The shoats, weighing about fifty to sixty pounds each, seem to be thrifty and doing well, but at one meal they eat heartily, and at the next one or two they refuse to eat, and when they do eat they vomit and gasp for breath." This is rather meager information, especially as vomiting may have a good many different causes. It is even possible that the shoats are not ailing at all, but are simply gluttonous and overload their stomach at one meal to such an extent as to have no appetite at the next. It is also possible that the fault is to be found in the quality and even in the physical condition of the food. Further, if the one or two animals that act that way are always the same ones, it is possible that they are suffering from a diverticle in the esophagus, which fills up at one meal and thus closes the passages until the animal gets relief, when the diverticle is emptied by vomiting; and in such a case the animal would be apt to gasp for breath until the relief has been obtained. Still, if all the shoats now and then act the same way,

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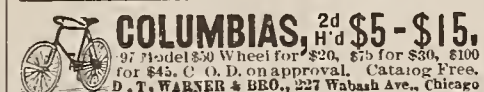


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MENTION THIS PAPER WHEN ANSWERING ADVERTISEMENTS.

the cause must consist in something else, because it is not at all probable that all of them should have a diverticle in the esophagus. Such a diverticle, as has been explained in a recent number of this paper, can be removed by a surgical operation if in the neck portion, but is incurable if situated in the chest portion of the esophagus, though I have my grave doubts whether such an operation, though not impossible, would not be practicable in a pig.

A Chronic Disease.—E. S., Deer Harbor, Wis. Although the symptoms you give are insufficient for a definite diagnosis, they show that the mare suffers from a chronic disease of the respiratory organs of a somewhat suspicious character. Therefore, if a veterinarian is available, I have to advise you to have the mare examined, and, according to the result of the examination, treated. It is utterly impossible to prescribe from a distance for such a chronic and probably complicated case of a doubtful, and even suspicious, character, because attempting to do so would be apt to result in vastly more harm than good.

An Indurated Quarter.—R. J. D., Covington, Va. What you describe is an indurated quarter of the udder of your cow, which cannot be restored to a normal condition. It is therefore advisable to leave it alone and not to irritate it, and thus produce and increase the morbid changes. If in only one quarter the glandular tissue has been destroyed by induration, the real loss is not as great as one may think, because experience teaches that the quantity of milk produced by the three remaining quarters is nearly, though not quite, as large as that formerly produced by all four. The most serious damage consists in the inconvenience of having to milk three teats, and in the danger that the induration and swelled quarter may be injured, and thus the morbid process be caused to become more extensive, or more or less malignant.

A Long Wart on the Teat of a Cow.—P. B., Ilse, Col. If the long wart on your cow's teat has a neck, or is thin at its base, put a noose, made of a waxed end from a shoe-maker, around it as close to the teat as possible, and draw it as tight as you can. Or perhaps still better, apply an elastic ligature; that is, take a thin rubber tube, draw it out as long as you can without breaking it, and in that stretched condition tie it around the root of the wart as close to the teat as it can be done. If the wart has no such neck, it will have to be removed with a knife; but after that has been done the bleeding will have to be stopped, and the remaining roots will have to be destroyed by an application of some caustic, nitrate of silver, for instance, provided the bleeding surface is not too large. If the wart is very large it will be best to have the operation performed by a veterinarian.

A Stunted Steer and Unthrifty Pigs.—H. C., Wakarusa, Kan. The mere information that an animal does not grow, is, and remains poor, and is unthrifty, does not convey any idea concerning the original cause or causes beyond the fact that the process

of nutrition is very defective, which is something that may be brought about by a large number of primary causes; for instance, food insufficient in quantity or quality, or both, undue exposure to the inclemencies of the weather, particularly in the winter, previous or yet existing diseases productive of morbid changes interfering with the processes of digestion and nutrition, the presence of large numbers of worms, etc. In such cases, before anything can be accomplished, the causes, mediate as well as immediate, must be ascertained, and then if it is found that the same can be removed, improvement and even a restoration to health is possible; but if the causes are such that they cannot be, or are not, removed, or if the morbid changes already produced are of a permanent character, such cases are hopeless. The remedy in all such cases consists in removing the causes and in providing a suitable diet, and not in medication, which is useless.

Smut.—J. H., Puyallup, Wash. I. Smut in grain is caused by the smut-fungi (Ustilaginaceae), of which there are several species; for instance, *Ustilago carbo*, principally on oats and barley, seldom on wheat, and only in exceptional cases on rye; *Ustilago hypodites* and *longissima* on various grasses; other species, *Crameria*, *Tulasnei* and *destructans*, on various kinds of millet; *Ustil. thyphoides* on reed (*Phragmites communis*); *Ustil. scalis* on rye; *Ustil. caries*, or *Tilletia caries* on wheat; *Ustil. maidis* on Indian corn, and a great many more of perhaps less importance. 2. All smut-fungi seem to possess more or less poisonous properties, and are accused of being able to produce abortion. Animals (cattle, and horses, too) which had been fed with chaff and straw very much contaminated with *Ustilago* or *Tilletia caries* and slightly with *Puccinia graminis*, presented the following symptoms: Spasmodic mastication and slaving; spasms, especially in the neck, unconsciousness and even inability to remain on their feet (by some); conspicuous weakness in the loins, insensibility and great dullness (in all); discharges from the nose and watering of the eyes; laborious and accelerated breathing; frequent voiding of excrements and of urine and fruitless attempts to do so; high fever. At the post-mortem examinations of cattle morbid changes, consisting in sagulations and erosions in the fourth stomach and the jejunum, and in swelling of the mucous membrane of nearly the whole intestinal canal, were found. Haselbach observed a case in which eleven cows aborted after having eaten very smutty corn. He then tried the smut on two female dogs heavy with pups, by giving to each half an ounce the first day and two drams the second day. Both aborted within two hours after the second dose. Goehler observed a sudden dying of seven sheep, which had been feeding on reed (*Phragmites communis*) badly affected with smut. A herd of fourteen head of cattle also had been eating young reed that was very smutty; all of them took sick, and six died in a short time. Supposing that the above will suffice to answer your question, I will not cite any more cases.

Our Miscellany.

FIRST BICYCLE GIRL—"Oh, yes; I often fall off, but I always land on my feet."

Second ditto—"I think you said you were from Chicago."—Boston Transcript.

"You speak of your colleague as having a mercurial temperament," said one statesman. "Yes," replied the other, as he wiped his perspiring brow; "the great trouble about him is that you can't keep him down."—Washington Star.

FIRST LADY—"There goes young Mrs. Pedigree. I suppose she bores people to death telling the bright things her little boy says?"

Second lady—"Oh, no; fortunately he says such dreadful things they can't repeat them."—Tit-bits.

"Why," said the patriot, "the United States would have a picnic with Japan if she objected to our annexation of the Hawaiian islands."

"Of course," echoed Joe Cose, "and the islands would furnish the sandwiches."—Philadelphia North American.

VIOLA, TENN., June 16, 1897.

THE CUTAWAY HARROW CO., Higganum, Conn. Gentlemen:—I have just finished cutting the best field of wheat I have ever grown, prepared and cultivated exclusively with the TORNADO CUTAWAY. I also have a neighbor who used only the Tornado Plow who has shocks standing on his field like bundles on fields cultivated in the ordinary way. Yours very truly,

(Signed) E. W. SMARTT.

PREPARING its readers for what may happen, the Boston Advertiser (Rep.) says: "It is possible, of course, that for a time after the new tariff bill goes into effect there will still be a deficiency of revenue. It will take time for the full effects of the new order of things to be realized. It is possible, though not probable, that when Congress comes together next December some temporary enactment will be required to bridge over the interval."

If interested in knowing where good prairie, timber or bottom land can be had on very reasonable easy terms—land that will grow 50 to 75 bushels of corn per acre, 20 to 40 bushels of wheat, 30 to 60 bushels of oats, and that is unequalled for fruit, potatoes, blue-grass, timothy and clover, where there are no crop failures and where the advantages of short, mild winters exist, read the advertisement of the Kansas City, Pittsburg and Gulf R. R. in this paper, and then write F. A. Hornbeck, Land Commissioner, Kansas City, Mo., and he will send you, if you mention FARM AND FIRESIDE, free of charge, all the facts about the New Country which is being opened up by this great railroad.

LOST FOR 1,000 YEARS.

The quarries from which the ancients obtained their highly prized Thessalian or verd marble have been discovered, and are again being worked by an English company. The quarries, which have been lost for more than 1,000 years, are in the neighborhood of Larissa, in Thessaly, Greece. The ancient workings are very extensive, there being no fewer than ten quarries, each producing a somewhat different description of marble, proving without doubt that every variety of this marble found in the ruined palaces and churches of Rome and Constantinople, and likewise in all the mosques and museums of the world, came originally from these quarries. In fact, the very quarry from which the famous monoliths of St. Sophia, Constantinople, were obtained can be identified with absolute certainty by the matrices from which they were extracted.

In modern times verd antico marble has only been obtainable by the destruction of some ancient work, and it has naturally commanded extraordinarily high prices. As a consequence a number of ordinary modern greens of Greek, French, Italian and American origin have been described and sold as verd antique marble. No one, however, who is really acquainted with the distinctive character of the genuine material could be deceived by these inferior marbles. Thessalian green is easily distinguished by the following characteristics: It is a "breccia" of angular fragments of light and dark green, with pure statuary white, the whole being cemented together with a brighter green, while the snow-white patches usually have their edges tinted off with a delicate fibrous green radiating to the center of the white. The cementing material is also of the same fibrous structure.—Philadelphia Record.

POTATO HARVESTING.

No potato-digger, no matter at what price it may be sold, can do any better work than the Success "Gilt Edge" Potato Harvester, made by D. Y. Hallock & Son, York, Pa. If your local dealer does not keep this best of all potato harvesters in stock, you should not fail to write to the manufacturers at once. Its low price (\$25.00) is a marvel, and you do not risk anything in testing this machine, because it is a fact that they will send a sample to any responsible farmer on approval.

ORIGIN OF THE LANGUAGES.

This enigma Mr. Hale undertook to solve in an address delivered in 1886 before the Section of Anthropology in the American Association for the Advancement of Science, of which association he had been elected one of the vice-presidents and chairman of that section. The address was on "The Origin of Languages and the Antiquity of Speaking Man." In this essay he maintained that the human race, when first endowed with articulate language, was necessarily of one community and one speech, and that the origin of the various linguistic stocks is due to a force which is in constant activity, and which may be styled "the language-making instinct of very young children." Many instances of languages thus spontaneously created by children were given; and in a later paper on the "Development of Language," read before the Canadian Institute of Toronto, in 1888, as a sequel to the address, and published in the journal of the institute, and afterward separately, further evidence was produced to show that the words and grammar of such languages might, and in many cases probably would, be totally different from those of the parental speech. In the original address the fact was pointed out that in the first peopling of every country, when from various causes families must often be scattered at wide distances from one another, many cases must have occurred where two or more young children of different sexes, left by the death of their parents to grow up secluded from all other society, were thus compelled to frame a language of their own, which would become the mother tongue of a new linguistic stock. It is evident that along with their new language these children and their descendants would have to devise a new religion, a new social policy, and in general new modes of life, except in so far as reminiscences of the parental example and teachings might direct or modify the workings of their minds. All these conclusions, it is affirmed by Mr. Hale in his introduction to the committee's sixth report to the British association, "accord precisely with the results of ethnographical investigations in America."—Appleton's Popular Science Monthly.

DESTRUCTION OF SCALE ON FRUIT-TREE BRANCHES.

I may say that I have not tried lime-wash to destroy scale, but I have tried common lime-wash, and tried it so successfully for the past forty years that I have not tried anything else.

Not only for fruit-trees, but for all sorts of trees; for instance, trees in cities frequently become somewhat stunted in growth and covered with the bark-scale. When a case of this kind is encountered the trees are headed back during the fall, all small spray removed and the whole body and branches covered with lime-wash, which effectually cleans them. Orange-trees when attacked are treated in the same way, and with the same result.

A grapeery becoming infested with mealy-bug had, after pruning, the entire wood, old and young, covered with the wash, and the bugs were exterminated. Last fall I came across an old Opuntia in an out-of-the-way corner, which was entirely covered with scale. It was completely covered with the wash, and is now perfectly clean. The wash flakes off, and the scale insects with it, smothered to death.

The Euonymus, roses, peach-trees—in fact, any plant with bark-scale—are cleaned and cured in this way, so that a boy with a bucket of whitewash is our cure-all for scale. —William Saunders, in Meehan's Monthly for June.

ONLY A JOKE.

"Sir," said the fiery little fellow, with some show of temper, "you have my umbrella."

"Your umbrella?" exclaimed the big man, who had just picked up the umbrella that the little fellow had carefully deposited in the corner.

"Yes, sir; my umbrella," repeated the little fellow. "And you are just about to walk away with it."

"Yes, yes, of course; merely a joke, you know," explained the big man, putting it back.

"Joke! Joke!" roared the little man. "Do you consider it a joke to pick up a nice new umbrella and walk away with it?"

"Why, of course," replied the big man. "Look at any comic paper and see if it is not so regarded."

And the little man could not deny that it had been so regarded ever since the time Noah went out of the wet.—Chicago Post.

A HEALTHFUL FRUIT.

A lazy dyspeptic was bawling his own misfortunes and congratulating a friend on his healthy appearance.

"What do you do to make you so strong and healthy?" inquired the dyspeptic.

"I live on fruit alone," answered his friend. "What kind of fruit?"

"The fruit of industry; and I am never troubled with indigestion."

PAVING WITH DIAMONDS.

With our present ideas of the worth of precious stones it seems almost incredible that they should have been used to macadamize streets in any modern city; but such seems to have been the case. The town of Kimberley, South Africa, was once a mining-camp. Near it were the famous diamond-mines, and the debris from the mines was used to pave the streets. Afterward, as machinery replaced manual labor, the miners thus thrown out of employment received permission to wash over the macadam in the streets to recover the diamonds in it. These washings produced about \$200,000 worth of diamonds yearly; magnificent stones were found, and some excessively rich places. As an example, they tell of twelve square yards of street that yielded \$10,000 worth of diamonds.—Good Health.

A CAT WITH DIPHTHERIA.

Mr. H. K. Griggs, secretary of the local board of health of Westbrook, reports the following case:

"Recently we had a family under quarantine with diphtheria. I cautioned the head of the family against allowing cats in the room where the child was sick, but he only pooch-pooched and called me whimsical. They let the child have the cat to play with constantly. The result was that within a few days the animal was taken sick; its throat was so swollen that it could not swallow, and it gave such unmistakable signs of diphtheria that they killed it without delay. That family has doubtless learned something from the cat, if they could not from the board of health.—Good Health.

Parties wishing to purchase a good, serviceable hay press at a very reasonable price should write the Kansas City Hay Press Co., Kansas City, Mo., for descriptive circular, etc., of their "Lightning" machine. Be sure to mention FARM AND FIRESIDE when you write.

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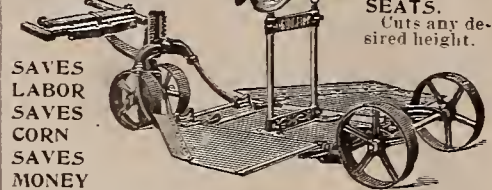
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\$200 IN PRIZES

FOR WINNERS IN THE

August Word Contest

On page 19 will be found the full particulars of the Farm and Fireside Word Contest for August. Who can make the most words by using only the letters found in the word "Beautiful?" Try it. You have a chance to get one of the six valuable prizes. Remember, it is for one month only.

An order for a subscription must come with the list of words. Offers in either this or previous issues of Farm and Fireside may be accepted. Below are some very liberal offers.

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For 25 CENTS we will send this paper for the REMAINDER of this year and any ONE of these six premiums:

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Smiles.

WHEELS.

Father makes a century
Every other day;
I am on a racing team,
Earning lots of pay;
Sister's learning fancy tricks,
Going on the stage;
Little Dick, he holds the mile
Record for his age;
Mother rides with Baby Dan
Tied in front—he squeals.
We're the gayest folks in town,
For we all have wheels.
Scorching, riding all the time,
Even late at night;
Then again at early dawn,
For an appetite.
All we talk about is "gears,"
"Saddles," "chains" and "tires."
"Records," "roads," the "makes" that all
And each one admires.
Thus we spend the speeding hours,
Pity each one feels
For our insane neighbors, who
Say that we have wheels.
—Buffalo Express.

DELAYED GRIEF.

BIDELIA left her place with Mrs. Brooklyn to marry a hod-carrier, who shortly afterward died. Within a year Bidelia consoled herself with a policeman on her beat. Shortly after she called upon her former mistress, dressed in deepest mourning, with a heavy veil.
"Why, Bidelia!" exclaimed Mrs. Brooklyn, "it cannot be possible that you have lost your second husband, too?"
"Oh, no, ma'am," returned Bidelia, cheerfully; "John's all right. I'm in mourning for my first husband. You see, when he died, ma'am, I had no money to buy mourning with; but John's plenty able to give it to me, and so I've just put it on for poor Mike."—Judge.

ANOTHER MATTER.

An Irish priest had labored hard with one of his flock to induce him to give up the habit of drinking, but the man was obdurate.
"I tell you, Michael," said the priest, "whisky is your worst enemy, and you should keep as far away from it as you can."
"My enemy, is it, father?" responded Michael; "and it was your reverence's self that was tellin' us in the pulpit only last Sunday to love our enemies!"
"So I was, Michael," rejoined the priest, "but was I anywhere telling you to swallow 'em?"—Youth's Companion.

WHAT HE WANTED.

An old dandy was encountered by the expedition sent by Uncle Sam for the relief of sufferers by the Mississippi floods. Uncle Eph was in a dilapidated-looking skiff or dug-out, which he was having considerable trouble to keep afloat. He was busy paddling with one hand and bailing out his craft with the other, when the relief-boat came within hailing distance of him. The captain of the relief-boat called to him:
"Hello, there, nitch! What do you want?"
"Nothing but wings, boss," was the answer. —Argonaut.

A PROPOSITION.

"Governor," said the young profligate, "do you think I would be warranted in getting married on a salary of fifteen dollars a week?"
"What do you mean by that?" growled the old man. "You never earned a dollar in your life."
"I know," drawled the young man; "but I know a girl who has a good job as a typewriter."—Chicago Times-Herald.

LESS AIR.

"The rooms are rather small," said the prospective summer boarder.
"The advantage of that," said the hotel-keeper, complacently, "is that not so much fresh air is required to keep them cool."—Philadelphia North American.

OVERHEARD.

A banana-skin lay on the grocer's floor.
"What are you doing there?" asked the scales, peering over the edge of the counter.
"Oh, I'm lying in wait for the grocer."
"Pshaw!" said the scales; "I've been doing that for years."

SUSPICIOUS GENEROSITY.

Benedict—"Dear Beatrice, I have changed my mind and you shall have your way. You may take that trip to the sea-shore, and you had better order a new gown right away. I am thinking also of buying that rococo furniture for your drawing-room."
Beatrice—"Oh, Ben, Ben! what have you on your conscience?"—Fliegende Blaetter.

BUSINESS FAULTS.

"Have you noticed how Stubbins repeats himself?"
"Yes; it is an atrocious habit. Yesterday he tried to collect a bill of me which he has collected twice before."—Detroit Free Press.

ANOTHER INJUSTICE.

"Where's yer brother got to lately, Liza?"
"E got ten days for knocking a policeman down."
"Wot! ten days for one policeman?"—Pick-Me-Up.

VERNAL VEXATIONS.

"How that woman did glare at you!"
"Yes; and I glared back at her. The hateful thing! She had on a shirt-waist just like mine."—Puck.

IN THE RIGHT PLACE.

The summer girl—"Oh, I love nature so!"
The farmer—"Well, miss, things is just as nacheral around here as they are anywhere."—Puck.

The following poem was sent to a young man in this city by a girl who was full of fun. He read the beginning in rapture, and only toward the last did he discover the proximity of the imminent, deadly breach:

Press me closer, all my own;
Warm my heart for thee alone.
Every nerve responsive thrills,
Each caress my being fills.
Rest and peace in vain I crave,
In ecstasy I live thy slave.
Dower'd with hope, with promise blest,
Thou dost reign upon my breast.
Closer still, for I am thine,
Burns my heart, for thou art mine.
Thou the message, I the wire—
I the furnace, thou the fire—
I the servant, thou the master—
Roaring, red-hot mustard-plaster.
—Green Bay Advocate.

LITTLE BITS.

"Sonny," said Uncle Eben, "don't yoh neh-her wase yoh time tryin' ter define what happiness is. It kin be anything fum a million dollars down to a circus ticket."—Washington Star.

Fond mother—"Oh, Peter, Peter, I thought I told you not to play with your soldiers Sunday!"
Peter—"But I call them the Salvation Army on Sunday."—Tit-bits.

"You needn't say woman has no mechanical genius. I can do anything on earth with only a hair-pin."

"Well, here, sharpen this lead-pencil with it."—Detroit Free Press.

Fuddy—"Spinner has taken to the lecture platform; reads his own poems."

Duddy—"Spinner always was an eccentric fellow. Always doing what nobody else ever thought of doing."—Boston Transcript.

Mrs. Manykids—"There is one good thing about our girls—they are always self-possessed."

Papa Manykids (grimly)—"Yes; they're too self-possessed. I wish they'd get some one else to possess them."—Puck.

Senator Silver—"Does the gentleman mean to say that I lie?"

Senator Fence—"The gentleman has too much regard for the courtesies of the chamber to utter the sentiment so aptly expressed by his learned friend."—Philadelphia North American.

A Washington clergyman tells a story of a class of Sunday-school boys who were reciting clauses of the Apostles' Creed in turn. When the last clause was reached one of the boys explained: "The boy that believes in the Holy Ghost is not here to-day."—New York Tribune.

Mrs. Snaggs—"I read a paragraph in the paper which said, 'Woman was made before mirrors, but it wasn't her fault.' Don't you think that is a mean remark to make about woman?"

Mr. Snaggs—"Yes, I think it is. What the writer meant to say was that woman was made before mirrors and had been before them ever since."—Pittsburg Chronicle Telegraph.

When a certain bishop was about to make a visitation of his diocese, his wife said to him:

"Now, hishop, you know you mnstn't eat any mince pie; for you know it never agrees with you."

"No, I won't," said the bishop, and for awhile he withstood the temptation in various quarters. But at last he succumbed to an especially choice piece, and it was so good that he ate another. That night he was taken violently ill, and the physician who was summoned was greatly surprised to find how extremely nervous his patient was over his condition.

"Why, hishop, surely you are not afraid to die?"

"Oh, no," said the hishop, "I am not afraid to die, but I am very much ashamed to die!"—Christian Register.

A HEALTHY WIFE

Is a Husband's Inspiration.

A sick, half-dead-and-alive woman, especially when she is the mother of a family, is a damper to all joyousness in the home. In some times marvel at the patience of some husbands.

If a woman finds that her energies are flagging and that everything tires her, her sleep is disturbed by horrible dreams, and that she often wakes suddenly in the night with a feeling of suffocation and alarm, she must at once regain her strength.

It matters not where she lives, she can write a letter. Mrs. Pinkham, of Lynn, Mass., will reply promptly and without charge. The following shows the power of Lydia E. Pinkham's Vegetable Compound, accompanied with a letter of advice:

"Dear Mrs. Pinkham:—I have suffered for over two years with falling, enlargement and ulceration of the womb, and this spring, being in such a weakened condition, caused me to flow for nearly six months. Some time ago, urged by friends, I wrote to you for advice. After using the treatment

which you advised for a short time, that terrible flow stopped. I am now gaining strength and flesh and have better health than I have had for the past ten years. I wish to say to all distressed suffering women, do not suffer longer, when there is one so kind and willing to aid you."—MRS. F. S. BENNETT, Westphalia, Kans.

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The picture is 21 inches wide and 28 inches long.

DESCRIPTION OF THE PAINTING.

The scene chosen for the painting is the "Judgment Hall" in the palace of Pilate, and the hour "early in the morning." Around the Governor the priests are gathered, and the high-priest, Caiaphas, is accusing Christ and demanding his death. The proud and furious bigot is all alive with excitement. There is a majesty about his pose, the consciousness of power in his look and gesture, and something of dignity in the superb audacity with which he draws Pilate's attention to the execrations of the mob (who are crying out, "Crucify him!") as expressive of the national will which the Governor is bound to respect, at the same time insinuating that to let this man go will be treason to Caesar, as well as a violation of the Jewish law which demands the prisoner's death for "making himself the Son of God." Pilate is yielding to the clamor, while his conscience, aided by his wife's message warning him not to condemn that righteous man, is protesting in tones which make him tremble.

THE CENTRAL FIGURE.

And the most impressive of all, is Christ himself, clad in white, with flowing hair and bound wrists. He stands alone in the simple majesty of his own personality, without sign or symbol save his individual greatness. A heavenly submission is on his face. Never before in any painting of the Messiah has anything of his personality in pose and figure been seen. The face has been that of Jesus, the form that of other men; but here the figure is of Christ himself.

OTHER LEADING FIGURES

Are represented by the proud and confident Pharisee, the haughty and contemptuous Scribe, the Roman soldier, and the rufian leaders of the mob. At one side a mother holds up her child to see the Savior. In the outer court the multitude is awaiting Pilate's decision.

WHAT OTHERS SAY.

WASHINGTON, D. C.
I saw the painting "Christ Before Pilate" in St. Paul, and can testify that the picture sent me is a perfect facsimile in every particular, especially in the coloring. I consider it an art treasure, and in view of the great value of the original, it certainly is.
MARY A. DENISON.

MUSKOGON, MICH.
I received the picture "Christ Before Pilate," and thank you a thousand times for having sent me such a beautiful picture. Would not part with it for \$20.00 if I did not know where I could obtain another. I shall give it the best place in our parlor.
CHAS. A. LINDSTROM.

NOEMAN, NEB.
I received the picture "Christ Before Pilate," and would not part with it for \$15.00 if I did not know where to get another. I will have it suitably framed, and I will give it the best place in our parlor.
N. L. JOHNSON.

ST. CATHARINE'S ACADEMY, RACINE, WIS.
The picture "Christ Before Pilate" duly received, and we are delighted with it. It is an excellent copy of the original, which we have seen.
MOTHER M. HYACINTHA.

ARTONDALE, WASHINGTON.
I have received the picture "Christ Before Pilate," and am well pleased with it. I would not take Twenty Dollars for it if I could not get another one.
A. D. WRIGHT.

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MIDSUMMER CONTEST

CLOSES AUGUST 31st.

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One \$100 Bicycle and \$100 in Cash

We offer six valuable prizes for the largest number of words which can be spelled with the letters in the word "Beautiful." To enter the contest an order for a subscription must come with the list of words. Any of the offers in this or previous issues may be accepted. (See page 16.)

First Prize,	For the largest list of words sent us,	One Bicycle (ladies' or gents'),	\$100.00
Second Prize,	For the second largest list,	Cash,	30.00
Third Prize,	For the third largest list,	Cash,	25.00
Fourth Prize,	For the fourth largest list,	Cash,	20.00
Fifth Prize,	For the fifth largest list,	Cash,	15.00
Sixth Prize,	For the sixth largest list,	Cash,	10.00
Total value of prizes,			\$200.00

CONDITIONS GOVERNING THE CONTEST.

Words must be written alphabetically, on but one side of ruled paper, and numbered, beginning with 1.

Words spelled alike, but having different meanings, can be used only once.

Variants will not be allowed; that is, use but one form of spelling a word.

Words (except those found in dictionaries in general use) formed with prefixes and suffixes will not be allowed.

Use no word commencing with a capital letter; as, proper nouns, adjectives derived from proper nouns, geographical names, etc.

Do not use obsolete, foreign and compound words, or abbreviations.

Other words—common nouns, adjectives, verbs, adverbs, pronouns, participles, prepositions, conjunctions and interjections—allowed. Plurals allowed.

Each letter may be used as desired, but not more times than it appears in the word "Beautiful." Work it out as follows: able, aft, ail, at, ate, bail, bait, bale, be, beat, beautiful, bet, bile, bit, bite, blue, but, etc., etc. These words may be used. Any dictionary in common use may be consulted.

The list of words must be written on separate paper from the subscription letter and signed with the contestant's name and address.

The paper may be ordered sent to one address and the premium to another.

In case of a tie, the sender of the largest list of words first received by us will get the first prize, and the sender of the largest list next received by us will get the second prize, and so on. Persons living in Springfield, Ohio, and Clark county, Ohio, will not be allowed to enter the contest.

Your list of words must be sent us during the month of August. The list will not be large, and can easily be made out. After the prize-winners are announced many will say, "Why, I could have made up that many words." Why not do it, and get a prize?

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HEADINGS OF THE CHAPTERS

- | | |
|---------------------------------|----------------------------------|
| I.—Gifts of Charming. | X.—Manicuring. |
| II.—The Secrets of Good Looks. | XI.—Cosmetics and Lotions. |
| III.—Grace and Expression. | XII.—Things Inquired For. |
| IV.—Bloom and Fairness. | XIII.—Defects and Annoyances. |
| V.—Hair, the Crowning Glory. | XIV.—Different Constitutions. |
| VI.—Training for a Fine Figure. | XV.—Health and Dress. |
| VII.—Women Bred for Beauty. | XVI.—Lovable Faces. |
| VIII.—The Culture of Beauty. | XVII.—On Perfumes. |
| IX.—Toilet Elegancies. | XVIII.—Sanitary Improvements. |
| | XIX.—Diet for Beauty and Health. |

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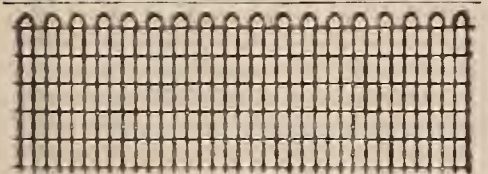
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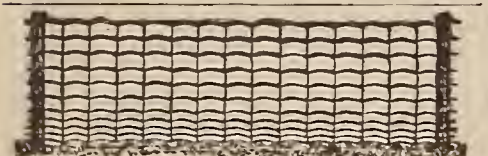


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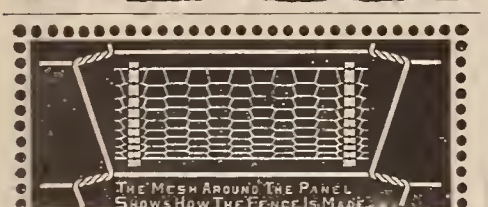


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Humor.

COOKING ACCORDING TO SCIENCE.

Give me a spoon of oleo, ma,
And the sodium alkali.
For I'm going to bake a pie, mama,
I'm going to bake a pie.
For John will be hungry and tired, ma,
And his tissues will decompose;
So give me a gram of phosphate,
And the carbou and cellulose.
Now give me a chunk of casein, ma,
To shorten the thermic fat;
And hand me the oxygen-bottle, ma,
And look at the thermostat;
And if the electric oven's cold,
Just turn it on half an ohm,
For I want to have supper ready
As soon as John comes home.

Now pass me the neutral dope, mama,
And rotate the mixing-machine,
But give me the sterilized water first,
And the oleomargarine;
And the phosphate, too, for, now I think,
The new typewriter's quit,
And John will need more phosphate food
To help his brain a bit.
—New England Magazine.

ONE CHANCE OF EFFECTING A CURE.

A nervous young lady called a physician for a slight ailment, but one which she magnified in her own estimation into a serious one.
"Run," said the doctor to a servant, giving him a prescription, "to the nearest drug-store, and bring back the medicine as quickly as you can."
"Is there much danger?" asked the young lady, in alarm.
"Yes," said the doctor; "if your servant is not quick it will be useless."
"Oh, doctor! shall I die?" gasped the patient.
"There is no danger of that," said the doctor, "but you may get well before John returns."—Boston Traveler.

ONE COMFORT.

"I may have bitten off more than I can chew," remarked the boa-constrictor, as the young gazelle disappeared within its capacious jaws, "but, thank fortune, I don't have to chew!"
And it curled itself up for a six-weeks' nap.—Chicago Daily Tribune.

PUTTING IT DELICATELY.

"I hope you appreciate the fact, sir, that in marrying my daughter you marry a large-hearted, generous girl."
"I do, sir (with emotion); and I hope she inherits those qualities from her father."—Harlem Life.

HER STRONG POINTS.

"Mrs. Meeker," observed a friend of the family, "is a very superior woman. She can converse intelligently. I believe, on a thousand different topics."
"Yes," sighed Mr. Meeker. "And she does."

CLASS PREJUDICE.

"Well, there is one thing to be proud of; we have no class prejudice in this country."
"I guess you were never around when three or four sophomores got hold of a freshman."—Indianapolis Journal.

IN THE WEST.

The minister—"Brother Jones was a worthy man and a good Christian."
The deacon—"Yes, indeed. Before he died he forgave the crime of '73."—Truth.

HIS IDEA.

"Isn't the emperor of Germany the grandson of Emperor William I.?"
"Yes; but he thinks he is the great grandson."—Puck.

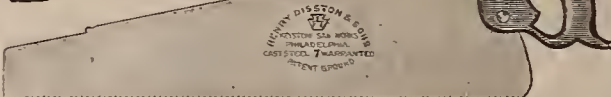
LITTLE BITS.

"You want to marry my daughter, eh?" said the practical man. "Well, what provision have you made for the future?"
"Oh, as to that," replied the suitor, "I'll join the church right away."—Philadelphia North American.

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VOL. XX. NO. 22.

AUGUST 15, 1897.

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In all America no semi-monthly has credit for one half so large a circulation as is accorded to the Springfield, Ohio, FARM AND FIRESIDE, and the publishers of the American Newspaper Directory will guarantee the accuracy of the circulation rating accorded to this paper by a reward of one hundred dollars, payable to the first person who successfully assails it.—From *Printers' Ink*, May 6, 1896.

minor crops are in promising form. The fruit crop generally promises good results. But these facts of large yield and good promise do not tell the whole story of prosperity. Prolific crops have been harvested before, but in some cases have, for want of consumption and demand, proven a burden rather than a blessing. It was a common saying that the farmer would rather have small crops with good prices than large crops and no prices. But this year come the abundant crops and high prices, a rare combination, and one calculated to warm the cockles of the heart of the thrifty farmer. Prices are high and inclining upward. There is no reason to fear a reaction and slump because of the actual conditions of the world's crops. The United States holds the key to prices. The wheat crop of the world is known to be about 100,000,000 bushels short. Argentine, India and Australia have no surplus, and Russia practically none. Great Britain, France and Germany are far short in their production of their home demand. There was an American surplus of last year's crop of 70,000,000 bushels, and the fortunate thing is that this is in the hands of the farmer. The advanced position of wheat developed before the farmer had disposed of his wheat to buyers, and now he will reap the full benefit of the advance. . . . The actual increase in money in the hands of the farmers through their wheat holdings throughout the country is an enormous sum. Wheat is worth now about twenty cents a bushel more than the crop last year, and the advance for this year has just begun. The market will

upward. Millions of bushels of old corn now lie in the cribs in the West, and with rising prices for this, as well as the new crop, there can be but one result.

"All along the line of agricultural production, including all live stock," continues Mr. Snow, "there is a general and steady increase. Large new flocks of sheep are contemplated as a result of the wool tariff, and the demand has increased the value of the sheep holdings of the country \$10,000,000.

"But the finest point in all these increases is the fact that they come at a time when the farmer holds his products, and that he individually will reap the full benefit. I have a little table here, prepared some days ago for publication, which shows the improvement in cash values of leading farm products. They are recent Chicago quotations for 1897 in comparison with those exactly one year ago:

	1896.	1897.
Wheat	\$.58	\$.77
Corn .....	.25 3/4	.27 1/2
Oats .....	.18	.17
Rye .....	.29	.39
Barley .....	.27	.31
Flaxseed .....	.73	.83
Hogs	\$2.90 to \$3.20	\$3.40 to \$3.60
Cattle	3.95 to 4.30	4.40 to 4.90
Sheep	2.00 to 3.30	2.35 to 4.00

"In these articles named, with the single exception of flaxseed, this year's supply is larger than that of last, and the supply, as I have said, is in the hands of the producer."

Taking from this list the three leading cereals—wheat, corn and oats—and the three classes of live stock—hogs, cattle and sheep—the farm value of this year's supply, at current prices, in comparison with the situation one year ago, is approximately as follows:

	1897.	1896.
Wheat	\$ 375,000,000	\$ 260,000,000
Corn	550,000,000	510,000,000
Oats	132,000,000	140,000,000
Hogs	233,000,000	196,000,000
Cattle (including cows)	1,192,000,000	1,012,000,000
Sheep	70,000,000	61,000,000
Totals	\$2,542,000,000	\$2,179,000,000
Increase, \$363,000,000.		

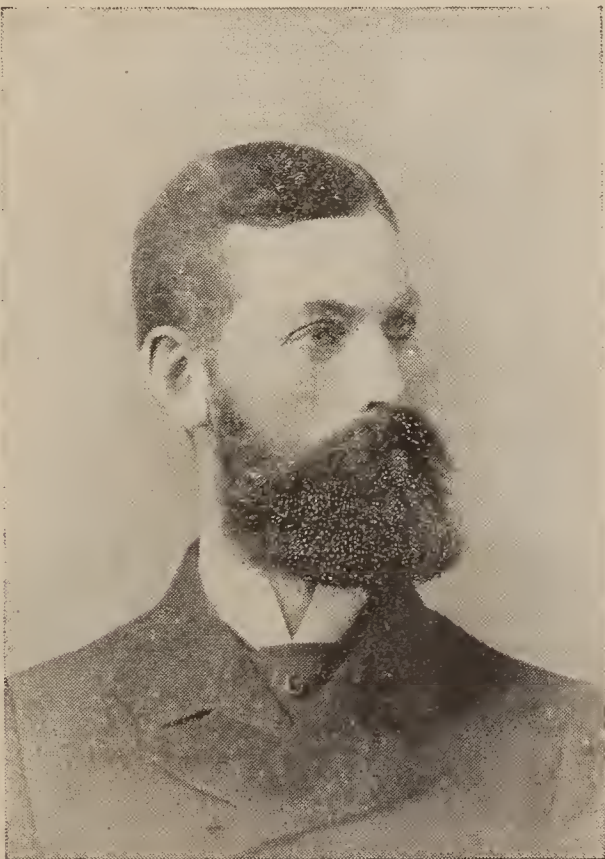
WITH THE VANGUARD

THE croakings of the pessimist are no longer heard in the land. The public will no longer listen to his prophecies of disaster. Prosperity, not prospective, but actual, is here. The farmers are busy taking care of bountiful crops, and will have money in abundance to spend next fall. Business has improved. Merchants are buying and selling on a larger scale than for months past. Factories are running, or getting ready to run, on full time and with full forces to supply the rapidly increasing demand for their products. Transportation facilities will be taxed to their utmost to carry the crops and merchandise. All lines of trade show a marked improvement, and prospects are bright. All this is based on the solid ground of prosperity in agriculture. In all the great agricultural states the crops are tremendous. And the price of nearly every farm product is advancing.

MR. B. W. SNOW, the ex-assistant statistician of the Department of Agriculture, who is still making a specialty of agricultural statistics, says, in speaking of the great agricultural wealth of the country at this time:

"With the bountiful crops throughout the United States, not in prospect, but actually in hand, with increased and increasing consumption at home and a larger foreign demand for American products, and with prices on the up-grade even while the crops are still on the farms, this year of 1897 will be remembered as a year of great agricultural prosperity and plenty.

"The crop season is now so far advanced that the final results can be safely promised. Nevertheless the result is no less pleasing than the earlier prospective hopes of the most optimistic. In no line of agricultural production is it a light year, and in most the yields are heavy. Hay has rarely flourished as it has this year. The abundant rains have given us a very unusual crop, and hay is a more important crop than usually thought. The rates of the new tariff law thoroughly protect our farmers in this respect. The year's wheat crop is the second largest in the history of the country, running upward of 500,000,000 bushels, and well distributed over the country. The corn crop promises a very large one. The oat crop is also well above the average. All the



HON. A. G. JUDD.

continue to rise. The increased value of the wheat crop of Kansas alone this year, in comparison with last, amounts to nearly or quite \$25,000,000, while the increased value of the country's crop at present prices is in excess of \$100,000,000 over that of last year."

Speaking of the outlook for the corn crop, Mr. Snow says:

"It is most gratifying. Although the season started late, the yield will be large. Two billion bushels is a fair estimate, as the acreage is the largest ever planted. Every indication points to advancing prices in corn. Last year at this time prices were shrinking at the prospect of a large crop; this year the tendency is

BEST of all, the farmers are raising the mortgages from their farms. During the year past the farm-mortgage indebtedness of the western states has been largely decreased. Millions and millions of dollars of mortgages have been paid off in Minnesota, the Dakotas, Nebraska, Iowa and Kansas. This decrease is not due to deeding the property to the holders of the mortgage, but to the actual reduction of debt by the debtors. With larger crops and higher prices the reduction in farm-mortgage indebtedness will be far greater in the next than in the past twelve months.

Reports from various states indicate the decided improvement of the condition of farming in this respect. Here is a sample from Governor Leedy, of Kansas:

"Kansas finds herself to-day with more of her debts liquidated and her finances in better shape than perhaps any other state in the Union."

HON. A. G. JUDD, of Dixon, whose portrait appears on this page, is one of the most progressive farmers and dairymen in Illinois. Mr. Judd is president of the state dairymen's association, which recently accomplished some very important work. He is an institute worker with a successful record. Some months ago the Illinois Association of Agricultural Editors began the work of reforming the management of the farmers' institutes, and got a good president elected. The association desires to complete this work by having Mr. Judd elected superintendent of institutes at the state fair meeting, and FARM AND FIRESIDE heartily indorses their choice.

FARM AND FIRESIDE

PUBLISHED BY

MAST, CROWELL & KIRKPATRICK.

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NOTES ON RURAL AFFAIRS.

What to Drink. It is a timely subject indeed. Drinking, like

eating between meals, is largely a matter of habit, and a bad habit, too; and yet, during the torrid heat of our bright summer days, the man who tills the soil in the broiling sun, or harvests the crops, and who is perspiring freely, will feel the need of something to moisten and cool his parched lips and throat. Drink he must at such times, although it should not be drink so much as sip, sip, sip. If the liquid could be taken with a teaspoon, it would be all the better, and it would be all the more cooling and refreshing. Where so many of our hard-working friends make their great mistake—and one that often causes them much temporary ill-feeling, if not actual sickness—is the habit of gulping down in long draughts great quantities of ice-cold water. Excessive doses of cold water are always dangerous, but if you must swallow it, first of all keep the ice away. Well-water or spring-water is cool enough. Then add some fruit-juice—raspberry, strawberry, currant, whatever it may be—or a few drops of lemon-juice. Even good vinegar or boiled elder and a little ginger is better than nothing. Or if you have no fruit-juice, you may add a little milk or cream. Sugar is always a good addition. My own preference in hot weather is for hot drinks—hot lemonade, hot coffee with plenty of milk or cream, hot but very weak chocolate, etc. Even hot water flavored with cream and sugar comes handy. And I can tell you that these hot drinks, when you once overcome your prejudice, will be found more satisfactory, more wholesome, than cold drinks, and surely safe and harmless at any time, what is more than can be said of ice-water, iced teas, etc. Whatever you take, however, don't fail to sip it—the more slowly the better. If you want to gulp it down, you do it at your own risk. Once more let me say it, try hot sips instead of ice-cold gulps. You will be astonished how cooling and satisfying they are. The cold drinks cool on first contact and perhaps make you shiver for

a second. After that the reaction sets in and you are hotter than ever, and the more you drink the more you desire to drink. The drink desire grows on what it feeds. On the other hand, the hot drink or sip seems to heat you up all the more on first contact; but after a minute or two there is relaxation and relief. You feel cooler, and free from the annoying dryness and insane desire for drink.

* * *

Some Poultry Matters.

I have been for some time wanting to tell some of my newer poultry experience in these columns. In some respects this experience has been quite satisfactory, but at least in one respect it has been somewhat discouraging. Rats have been the discouraging feature, and a great many of the little downy chicks, and ducklings, too, and some half-grown ones besides, and a whole lot of pigeons, too, fell victims to the pest before we found means to conquer it. We trapped and shot rats by the wholesale, and the more we trapped and shot, the more seemed to come. Rough on rats finally reduced their numbers somewhat, but the complete (or nearly complete) victory was secured only through the means of an old cat that was kept hungry by having to nurse five half-grown kittens. This cat could catch, kill and devour the old rats that were too cunning to get into a trap, or get in reach of the gun, or take poison. I found out, too, that it is a pretty tight coop that will keep an old rat out that has once tasted how sweet and tender the flesh of a little chick or duckling is. It seems that nothing short of solid iron will do it. These rats gnaw through board, and dig through walls and cement, and even pounded glass—and they can crawl through a pretty small hole. I have exhausted all my ingenuity, and failed. But a good hungry old cat in the barn, with free run through and about all the out-buildings, will soon give us relief of the rat nuisance.

* * *

Incubators.

Many years ago, before the modern incubator was invented, I called attention to the possibilities of artificial incubation, and, in fact, tried my hand on it to some extent, and with little satisfaction. Then I became a skeptic, especially when I saw that in the hands of the average person failure with artificial incubation was the rule and success the exception. I have sounded many a note of warning, and often called attention to the hundreds of incubator wrecks that were strewn all over the country. And yet I am converted again, fully and freely. Artificial incubation is the thing; and I believe that success can be secured with the majority of the incubators now put on the market if properly managed. These modern hatchers are self-regulating to a remarkable degree. We can keep the heat just to the required degree, if we will only give due attention to the machine for a few minutes twice a day. The only point of anxiety and uncertainty is that of moisture. But if we keep the incubator in a room that has an average amount of moisture, or can be kept a little moist, like an ordinary dwelling-house cellar, I believe we need pay no attention to the moisture inside the hatcher. But we should not ask too much of the machine. As an average we do not hatch more than fifty per cent of all the eggs we set under hens, if we do that, and then we lose many chicks by the old hens stepping on them, or even squashing them in the shell. Frequently the young stock has but little vitality transmitted to it from the parent stock, and the chicks are too weak to break the shell when ready to hatch, or the eggs were not fully fertile, so that the chicks started and then died. Don't expect that every egg—or even every fertile egg—placed in an incubator should hatch. If we hatch fifty out of a hundred and raise them, we are doing fairly well—much better than we usually do with hens. The mistake I made was in buying small-sized incubators. Why spend time on 100-egg sizes and raise fifty chicks from one hatch, when with the same attention and with a 200-egg size we can hatch and raise one hundred chicks, or with a 300-egg size one hundred and fifty chicks. I have one make, and like it very much. On the other hand, a neighboring poultryman has another make, which he praises highly, and says he wants no other.

Brooders,
Fountains, Etc.

About my home-made brooder, and the most excellent satisfaction it gives me, I will tell at another time. As to fountains, I use the self-feeding stoneware fountains (one-half-gallon size for newly hatched chicks, and two-gallon size for the larger ones), which can be bought of any dealer in poultry supplies. The chicks have a continuous supply of cool drinking-water which they can neither befall nor get into. The two-gallon size, once filled and placed in the shade, keeps the water cool and fresh all day long. For old fowls I have never found anything superior to the Hallock's food and water holder, picture of which is annexed. I use the largest size made, and find it very convenient, especially as it is easily kept clean. I fill mine with



milk in the morning, and with clear well-water when the milk is gone. The pau is easily detached and rinsed or washed out. It keeps clean without much trouble or washing.

T. GREINER.

SALIENT FARM NOTES.

Two years ago I bought a lot of clover-seed from a local dealer, and as he had said it was an extra nice, clean lot, I did not examine it closely, but sowed it immediately. Going over the ground some months later I discovered what was to me a new weed—the bracted plantain. It did not appear to be very abundant then; but later on, when the seed-bearing stems appeared, I learned to my sorrow that there was enough to make it a very serious pest.

Lyster H. Dewey says of this weed, in Farmers' Bulletin No. 28: "The bracted plantain is an annual, sometimes a winter annual, and in some cases the roots are apparently perennial. (This is the case on my land.) The leaves are not killed even by severe frosts. It is closely related to the lance-leaved plantain, or rib-grass, and to the woolly plantain. The leaves, appearing almost like a tuft of rather thick, dark green grass-leaves,



spring from the apex of a somewhat thickened root. The seed-bearing stems, five to ten inches in height, and numbering five to twenty-five on each plant, as in other plantains, are leafless and naked near the base. . . . The seeds usually fall near the parent plant, hence, after the first introduction, the bracted plantain grows in dense colonies, covering the ground so thickly as to choke out all other vegetation. An average plant produces about fifteen flower-spikes, and an average spike bears about one hundred flower-ers, or two hundred seeds, making a total

of about three thousand seeds to the plant. . . . If the land has become thoroughly seeded, a series of hoed crops will probably be necessary to clear it out."

* * *

The foregoing shows what a pest I inadvertently introduced upon my land. On mowing this clover-field a short time ago I found patches of this pest, two to four feet square, so dense as to have crowded out every clover and timothy plant growing on that space. Most of this field is planted to apple orchard. I intended to keep it in clover permanently, and, after mowing three or four years, to pasture it with hogs. How am I to rid that land of this miserable pest?

Must I turn the clover under, and at great expense grow three or four "hoed crops" on the land to clean it? Apparently that is just what I shall be obliged to do. The party who put that clover-seed on the market has given me a four-years' job. Many a farmer has been caught in a similar trap, and many a farmer has passed his troubles on to the next by selling clover-seed foul with the seeds of this and other pests.

* * *

Driving across the country a few days ago, I turned aside a little to call on a young farmer who, it seems to me, was a little school-boy only a very short time ago. He was "down the field cutting oats," so his neat little wife, who came to the door as I drove up, said. As I drove past his little barn, past the orchard, past his clean-cut meadow and through the field of corn, one thing impressed me greatly, and that was the neatness prevailing everywhere. The apple orchard was clean, the trees thrifty, symmetrical and loaded with fruit. Not a tuft of grass nor a weed could be seen anywhere around the meadow. Not a weed over four inches high could be seen in the little well-fenced pasture. No weeds were growing among the corn or around the field, nor along the hedges that separated his little farm from those adjoining.

When I reached the oat-field, there stood the stalwart, sun-bronzed man who only a very few years ago was a merry, careless, shouting school-boy. He was oiling the binder, with which he was cutting a ten-acre field of fine, heavy oats, while two young neighbors shocked them up. Here again that same thrifty neatness was apparent on every hand. The binder was six years old, yet it looked almost like a new one, and ran like a fiddle. It is owned by my young friend and a neighbor, and when not in use is kept in a close, water-proof shed. From all appearances it will do first-class work for fifteen or twenty years to come.

"We also own in partnership a mower, hay-rake, corn-planter and wheat-drill," said my young friend, "and we take care of them in such a way that they will do good work for the next ten to thirty years. If either of us should sell out and move away, we have an agreement that he—the mover—shall set a price on each of these machines, and the other shall give or take."

* * *

My young friend bought this farm on easy payments four years ago. He gave a stiff price, but he says he has been able to meet his notes as they came due, and he feels satisfied that in a very few years he will be entirely out of debt. He is a steady worker—not a "rusher"—a good manager, careful and economical and a close observer, and everything he does is done in the best manner. There is nothing wasted in the field, about the barn and yard or in the house. He and his little wife work together as one, and they are as certain to succeed as anything on earth is certain.

* * *

Strongly contrasting with the farm of my young friend is that of a neighbor who is land poor—who is trying to farm twice as much as he is able to. His hedges are high and ragged. Weeds are everywhere. His corn will need the best kind of a season to make two thirds of a crop. He lost ten acres of hay through not having force enough to get it stacked before a rain ruined it. His oats are light and full of weeds. More than half the trees in his orchard have been destroyed by borers and neglect. His machinery is standing out of doors. His wife and children are worn out with incessant hard work, and if there is a single ray of hope for him in the future, I am unable to discern it. Poor man! FRED GRUNDY.

Our Farm.

FARM THEORY AND PRACTICE.

THE WHEAT CROP OF 1898.—New plants and new crops are constantly being introduced and discussed, but in prime importance wheat ranks higher with the American farmer than all the new crops, taken together, that have been introduced into this country in the last century. The farmer tries this new crop and discards that one, but while so engaged he is probably depending upon his wheat, year by year, to pay taxes and furnish some other ready money. This is true throughout the wheat belt of the United States. The impression now prevails that prices should rule fairly good for the crop of 1897 on account of the probable foreign demand. Wheat is not commanding a high price from the threshing-machines, but the price is better than it has been for some years, and nearly every one believes that it will rise. All this sets one to wondering what the influence of this faith in wheat will have upon the area sown for next season's harvest. The world's supply of wheat continued to increase for several years, in the first part of this decade, until the surplus became a weight upon prices. For three or four years this surplus has been growing less, until it has ceased to exist as a depressing influence. Now, judging the future by the past, we shall probably grow larger crops for a year or two, when another disheartening surplus will knock all life out of the wheat market. This is not a matter within the control of the individual or of any single nation, and the only practicable thing for the farmer to do is to make sure as possible that whatever area he does seed shall yield enough bushels to the acre to let him out even with the world if prices do go tumbling to the lowest bottom next harvest, and to let him make some good money if the world's supply should remain rather short another year.

MOISTURE THE FIRST CONSIDERATION.

—The American farmer, in his rapid and impulsive way, thinks first of the kind and amount of fertilizer he will apply when he proposes to have a good yield of wheat. It is my experience and observation that comparatively few soils fail under favorable circumstances to make a fair crop of grain if the fall growth of the plants is pushed by abundant moisture. I have seen land, reputed "thin," or "worn out," make a good crop of wheat when there was an abundance of moisture after the seed-bed was made until winter set in. Now, this soil was made no richer by the rains, or practically so, and the fact that an abundant harvest was gotten proves that there was enough of the needed elements in that soil all the time. I am not arguing against fertilization of the soil, but we want facts, and the facts are that most soils can make a fair yield of wheat when the moisture is just right from seeding-time to winter, thus insuring a vigorous growth of thick-set plants. We have no insurance of such fall weather, but if we did have, we would hear less of dependence upon costly fertilizers. It follows as a reasonable inference that we should do all that is practicable to secure a moist seed-bed, and much can be done toward this end.

EARLY PLOWING, FINING AND FIRING.

—I have grown a good crop of wheat on land that was plowed late in the fall, a heavy crop of weeds being turned under, but this only illustrates the fact that a moist season may save us from the effects of our mistakes. The clouds provided for the continual necessities of the little plants in that loose and airy seed-bed. Four years out of five sufficient moisture must be secured by plowing early, and then making the soil fine and firm. It cannot be made too firm, even by tramping of horses, if the work is done when the ground is in proper condition for working. The best wheat in poorly prepared fields is generally near the corners where the teams do the most tramping. Thorough and early preparation enables one to get full benefit of subsequent rains before seeding-time, and if little rain comes, there is still a fair amount of water near the surface, as moisture is continually rising from the subsoil. I obtained the clearest proof of this fact by mulehing two acres of well-prepared wheat land with straw,

using about two tons to the acre and burning off before seeding. The fall was very dry, and the amount of water in that soil was a revelation to me.

FREING PLANT-FOOD.—While one is paving the way for collecting and holding a supply of moisture in the soil he is also making plant-food available. The crushing of the soil, bringing new particles into close contact and exposing the particles to the influence of air and moisture, in some way makes plant-food available, and has the same effect upon yields that the application of fertilizers have—the same effect in kind, though not always in degree. Notwithstanding all that has been written on tillage, and all that has been experienced by good farmers, our leading agricultural scientists believe to-day that the most of us fail utterly to appreciate the mine of wealth we have in our soil, if only we would free it by tillage so that plant-roots could use it. We seek fertility in other quarters, unmindful of its abundance in our soil, if only liberated by continued crushing and stirring of the particles.

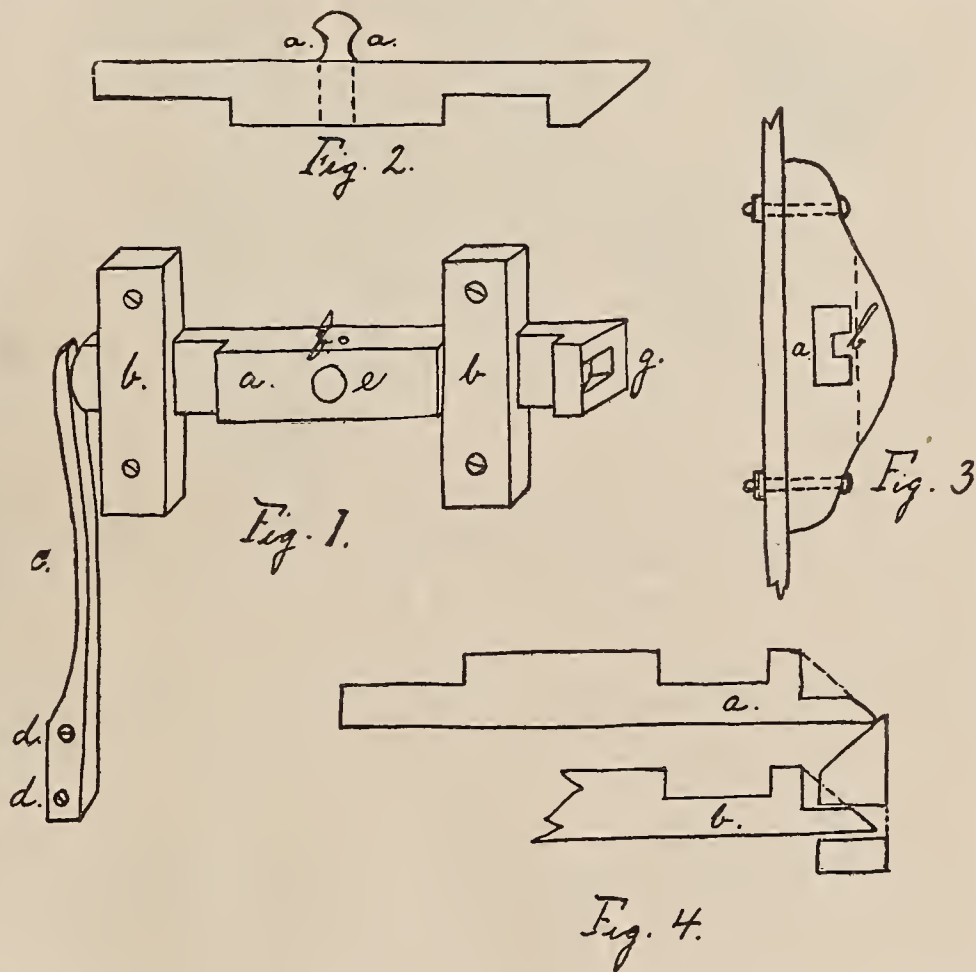
DEPTH OF SEEDING.—In his valuable book on "The Fertility of the Land," Prof. Roberts says: "Some plants are more likely to escape the vicissitudes of our erratic climate, if induced by good

dangerous; we are running the risk of possible accidents, to say nothing of the annoying part of it. Years ago I had a horse injured in this way quite seriously. It was passing the door at just the moment when the door was blown to and struck it. The horse jumped to get out of the way of the door and struck its hip against the other door-post, hurting itself so badly that it could not be used for weeks.

When cleaning out stables we often have the same trouble; the door closes when it is the least expected, just when we have a forkful of manure under way to be thrown out. Then we go and set a fork or stick against the door, and this, of course, takes time.

The device here illustrated is a facsimile of some I have in use; it is in the main an old-fashioned slide, but somewhat improved. The drawing is so explicit that a detailed description is not needed; a few general hints will be sufficient.

The main parts, slide and slide-blocks, Fig. 1 a and b, should be made of well-seasoned hard wood, beech or maple preferable. Certain dimensions are not essential, but we should bear in mind that the smaller the scale, the closer work it requires to have the slide work well. Mine are made of two by two and one half inch blocks, the slide sixteen inches long. The spring, c, is made of a stick of



physical conditions of the soil to form roots at some distance from, instead of near to, the surface; while others, as winter wheat, do best if the fall feeding-roots form "thin two or three inches of the surface; hence air, moisture and nourishment should be associated in the best proportions and at the right distance from the surface." When a soil is fine and firm, the moisture rises near the surface, and the wheels of a grain-drill do not sink deep into the soil. Under these circumstances a splendid job of seeding can be done, the seed being covered about one inch deep in the bottom of the drill-mark. No roller should follow the drill—its place is before the drill. The little furrows left by the hoes are a protection to the plants, often preventing winter-killing.

FERTILIZERS.—In respect to fertilizers each farmer is under the necessity of determining for himself what kind of fertilizers are most profitable for his soil. After using rotted sods, stable manure and tillage, he may find some chemicals very profitable. Only experiment on his soil can determine this matter. DAVID.

DOOR-FASTENINGS.

Does every farmer know how many steps and frequent annoyances it would save if all our barn and stable doors were provided with spring-locks to shut, and spring-catches to fasten them when opened? How many times has it not happened that when we want stock of any kind to go in or out of a stable the wind slams it to just when a cow or horse is passing or is about to pass it? This may not always cause any harm, but it is

tough, straight-grained hickory, one inch square at the end where it is screwed to the door; the rest is shaved down to give it the necessary elasticity. The stiffness of the spring is governed by the proper adjustment of the two screws, d, d. To open the door from the outside, the slide has a short pin, e, fastened by a screw, f, reaching into a corresponding slot in the door. Care must be taken not to let this pin project outside of the door surface, as it would strike against the barn when the door was opened. A couple of notches in the pin, Fig. 2 a a, will give the thumb and forefinger a better chance to operate the slide and pull the door open.

This same arrangement answers the double purpose of fastening the door when opened. The catch-block, Fig. 3, is securely bolted to the barn; it has a square mortise, a, with a little tenon, b, to receive the slide, and the slide has on the slant a notch, Fig. 1 g, to receive the tenon. The catch-block is slanted from the mortise to the outer edge to make the slide move back when it strikes. A cross-section of both slide and catch-block is shown at Fig. 4, in two positions; a, when the slide first strikes, and b, after it has entered into the mortise.

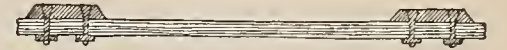
A door with this combination is a convenient affair; a little push with a slight slam will fasten it in either direction. If it should be left swinging, as it sometimes has to be, it matters not which way the wind blows, it can only slam once, and then fastens itself automatically. The force of the slam is greatly reduced by the action of the spring; for this reason the stiffer the spring the better.

G. C. GREINER.

IRON ROADWAYS FOR THE PRAIRIES.

Having given the subject of iron roadways some study I venture to give my opinion. I am satisfied that iron roadways are the thing for this prairie country. On the prairies ballast of any kind must in most cases be hauled long distances, making the cost of the iron roadway, even with double track, the cheapest. Any kind of ballast needs an amount of repair equaling the cost of a new road almost once in from six to ten years. The iron roadway would probably last two or three times as long, the repairs being almost nothing.

There need be no flange or elevation on the inner side of the rail. Make them perfectly flat; the wagons will not run off. In common country roads the wheels do not make ruts more than twice the width of the tire, no matter whether the ground is hard or soft. Teams traveling on ice for miles leave a regular wheel-trail not wider than the rut on the country road. I would make a rail after this fashion:



Let the rails be perfectly flat, eight inches wide at top and ten inches at bottom, with a bevel of an inch on each edge. Then wagons and bicycles can drive over them in any direction without inconvenience. The beveled edge will throw the horse's foot away from the edge of the rail should he chance to step on it, thus preventing the shoe from catching under the edge of the rail. Lay the rails so that the wagons will track near the inner edge. Then when the inner edges become worn change sides with the rails and get another season of wear. Let the bolts be countersunk with a long slope clear through the rail so that they will not come through by wear. Drain roads with tile in the center, not on the sides. It takes only one tile instead of two; lowers the water-level in the road center, and is much less liable to be filled by tree-roots. Illinois. M. W. GUNN.

GROWING CANTELOUPS.

The growing of canteloups for market is an excellent business for gardeners and truck-farmers. In the irrigated West, near a good market, an acre planted to canteloups pays better than any of the usual garden products, comprising more than a dozen vegetables. Market gardeners near Salt Lake City report the yield to the acre for several years to be 1,814 dozen, giving an income of \$1,088.40 each year. These figures are much higher than my experience warrants placing them. Planted six feet apart either way gives 1,210 hills, which average one dozen salable melons to the hill. These usually sell at fifty cents a dozen as an average for the season, making the income \$605 an acre.

Among the several canteloups and muskmelons that pay to grow are the Acme, Emerald Gem, Montreal and Hackensack. These ripen early and late, and enable the grower to be upon the market every day during the season. The best method of planting is to have the land laid off in squares six feet each way, and plant four or five seed in a hill, using the northern slope for the hill. When fully up and in sight along the rows, a cultivator, of two or five shovels, should be used between the rows, plowing both ways. Hand-weeding and a hoe are necessary when the plants are young. If irrigated, the water must be used sparingly until the fruit begins to set, when plenty of moisture improves the quality and increases the quantity. When the vines begin to run they should be hilled up similar to potatoes.

The pruning system, I find, is very important and increases the yield, if promptly and properly performed. Some merely pinch off the runners, while others cut with a hoe or knife. My plan is to cut back the main vines and trim off the surplus shoots with a pair of long shears. The prunings should be picked up and carried off the melon-field, as they destroy many young buds, blossoms and even fruit if left to wither and dry among the vines. Cultivation should cease after the vines begin to blossom, and the fruit should remain undisturbed until ripe. In marketing the canteloups should always be crated and assorted into two uniform grades. If mixed, big and little, the price will be cut accordingly. Put up one first-class grade and command the top market, while the second-class sells for the average price. JOEL SHOMAKER.

Our Farm.

A NOTABLE AGRICULTURAL CONVENTION.

THE annual convention of American Agricultural Colleges and Experiment Stations, recently convened in Minneapolis, was an important gathering of earnest workers in the cause of practical and scientific agriculture. Nearly two hundred delegates and visitors were present, representing nearly every state and territory in the Union. As would naturally be expected, a large part of the delegates were presidents of colleges of agriculture or directors of experiment stations.

Prominent among the delegates were President H. H. Goodell, of Massachusetts; President G. T. Fairchild, of Kansas; President Cyrus Northrup, of Minnesota; President J. H. Canfield, of Ohio; President John Washburn, of Rhode Island; Director W. A. Henry, of Wisconsin; President H. E. White, of Georgia; Director W. M. Liggett, of Minnesota; Director A. C. True, of the office of Experiment Stations, Washington, D. C.; President A. W. Harris, of Maine; Director C. E. Thorne, of Ohio, and others.

Without any preliminaries save a brief but hearty word of welcome from President Northrup, of the University of Minnesota, the convention began its work. The first thing in order was the report of the chairmen of the different sections. President C. S. Markland, of New Hampshire, spoke for mechanic arts; Director W. H. Jordan for agriculture and chemistry; Prof. P. H. Mell, of Georgia, for horticulture and botany; Prof. A. D. Hopkins, of West Virginia, for entomology; and President H. E. White for the section of college work.

The report of Director Jordan, of New York, excited the greatest interest and elicited the most discussion. He stated that over \$2,000,000 were now expended annually in instruction, training and investigation for the industrial classes. Of this sum about \$720,000 were appropriated for experimental station work or for investigation. The remainder was expended for instruction and training in practical agriculture and horticulture, the mechanic arts, and the sciences related thereto.

Inasmuch as a very large proportion of all the experiment station workers were teachers, Director Jordan took the ground that the work of investigation was suffering, and at the expense of the department of instruction. It was impossible to give the former branch the care, time and attention it deserved, because so many of the men at the stations were burdened with educational duties.

President Harris, of Maine, proposed a collective exhibit of the experiment stations of the United States for the Paris Exposition in 1900, and the following committee was appointed to take the subject under consideration and report at the next meeting: President A. W. Harris, Directors H. P. Armsby, W. H. Jordan, W. M. Liggett and M. A. Scovell. A committee was also appointed to provide ways and means whereby the graduates of our land-grant and other colleges should be granted access to the congressional library, the records and museums of the Smithsonian Institute, the national museums and bureaus of the various departments of the federal government.

Dr. True, of Washington, reported that all the agricultural literature would be indexed by the United States Department of Agriculture, just as fast as funds were available, and that Secretary Wilson was in favor of having the work pushed to its completion at as early a date as possible.

Among the notable addresses before the convention was one by Prof. Henry E. Armstrong, of the Royal Agricultural Society of England. He came as a special delegate from the United Kingdom, and the representative of the Sir John B. Lawes trust fund.

He described the work of the Rothamsted experiment station, and by means of a series of charts illustrated the results of different fertilizers upon wheat and barley for the last fifty years. The general results established the great value of nitrogenous manures, the secondary importance of minerals, especially the comparative insignificance of phosphates. The continued effects of barn-yard manure were shown to be excellent compared to commercial fertilizers, and their lasting qualities were most marked.

Dr. Armstrong dwelt upon the effect of climate and the availability of the natural food constituents of the soil, whose characteristics he was discussing, and stated that this availability might be regarded as one of the most important lessons of the half century's work at Rothamsted.

Dr. Wiley delivered an elaborate address upon the "beet-sugar industry." He showed the gradual increase in beet-sugar production in the United States from a few hundred pounds in 1850 to 40,000 tons in 1896. Enough beets could be raised on a tract of 1,000,000 acres, if properly cultivated, to supply all the sugar needed by the people of this country.

A pretty high average degree of heat appears to be essential to the successful cultivation of the sugar-beet. If the temperature averages less than seventy degrees Fahr. for the months of June, July and August, the beet will not thrive in perfection.

Dr. Wiley claimed that the sugar-beet was in itself a most valuable experiment station. If grown profitably it must be grown according to scientific methods; and when farmers realize that success or failure depends upon method of culture, they will not be slow to adopt better methods for other crops. In every locality where the sugar-beet is successfully grown the land has increased rapidly in value.

Professor Henry said that a beet-sugar factory had failed in Wisconsin, but the failure had been due to financial, rather than agricultural or climatic reasons. Many of the farmers of the state were well-to-do Germans, who had been engaged in beet culture in the old country, and they had been marvelously successful in raising beets on their Wisconsin farms. He predicted a bright future for the sugar-beet industry in that state.

The annual address by President Fairchild, of Kansas, showed the gradual change or evolution in agricultural education during the past forty years. The first idea was education for agricultural, the second education in agriculture, and the third education by agriculture. In other words, the introduction of the fundamental principles of plant and animal life, as a study of the every-day facts and forces of nature in our common schools, is now a dominating idea in agricultural education.

The association visited the Minnesota School of Agriculture, at St. Anthony's Park, also the branch experiment station at Crookston, Minn., and the Agricultural College at Fargo, N. D.

APPLE AND PEACH ORCHARDS OF SOUTH MISSOURI.

Statement showing the number of acres in apple and peach orchards, and estimated production of fruit for the year 1897, in the great fruit-growing district of south Missouri on the line of the Kansas City, Fort Scott and Memphis Railroad, Springfield to Thayer, inclusive:

COUNTY.	Acres in Apple Trees.	Acres in Peach Trees.	Acres in Bearing Apple Trees.	Acres in Bearing Peach Trees.	Estimated Apple Crop, Barrels.	Estimated Peach Crop, Bushels.
Greene	8,000	600	4,000	500	80,000	37,500
Webster	7,000	500	3,000	100	60,000	7,500
Wright	4,000	1,500	3,500	900	70,000	67,500
Texas	6,500	2,000	4,000	1,500	80,000	112,500
Howell	8,000	3,000	5,000	2,000	100,000	150,000
Oregon	1,000	1,000	750	500	15,000	37,500
Totals	34,500	8,600	20,250	5,500	405,000	412,500

IMPROVEMENT IN DAIRY HERDS.

In breeding for the dairy any marked improvement must be preceded and based upon a definite line of procedure. The one important factor above all others in the problem is the sire. Improvement of the dairy-cow—the average as found in the dairy herds of the country for foundation stock on that side—requires in the first place that the sire has come down from some of the best pure-blood milking strains of the breed he represents. But the intelligent breeder will not breed indiscriminately regardless of traits and qualities in the dam, neither will he let his selections from his heifer calves take rank in the same way.

No satisfactory improvement can be acquired in the dairy herd by a system which permits the indiscriminate slaughter of the heifer calves from year to year. Building up and improving a dairy herd, as applied to the average herds of the country, must be a procedure based upon the ap-

preciation attainable in the common or grade blood of the home yard by the introduction of the prepotent force of pure blood through the sires.

Not all heifer calves, of course, should be spared the block, but certain of the best from a certain line of cows. It frequently happens that an apparently unpromising cow will develop more than common traits as a milker and butter-producer as she ages. If such a cow has the marks of a good milker, and otherwise proves herself possessed of meritorious traits, it is wisdom to breed from her by as good a sire as can be found of the dairy type, trusting to the prepotency of the sire to stamp his inheritance of the dairy qualities sought upon his progeny in the female line.

Whether the female offspring of such a mating will inherit the good qualities of both sire and dam in intensified form time will develop. If she proves to be a good milker and butter-producer, the chances are favorable that if bred aright her heifer calves will be an improvement in these respects upon herself. If they are, and these are bred in the same lines as to improvement, the chances become more favorable that an improvement will be constant.

It is here that the value of improved pedigree stock is shown with the wisdom of proper selection and mating in breeding for the dairy. The characteristics of a breed, as represented in the pure-blooded sire, are fixed by harmonious breeding to produce those characteristics, and will be reproduced in the progeny of such a sire. The same tendency is strengthened in a proper course of breeding in our common and grade cows. Improvements in breeding have been reached by carefully selecting and then carefully feeding, which proves the truth of the statement that it is only possible to get the best from the best. The history of our improved breeds of stock proves this. The superiority which the Holstein breed of stock has attained as milkers, and the Jersey, Ayrshire and Guernsey as butter-makers, was acquired in no other way than by adopting and practically applying the philosophical doctrine of "the survival of the fittest," continued without deviation or any intermission for hundreds of years.

It may be proper to remark that here is where the value of a registered pedigree is apparent. The fact that a book contains the brief statement of the ancestors of an animal is nothing of itself; but the fact that it tells that an animal has certainly come from a long line of ancestors that have regularly transmitted their characteristics is everything; for it not only shows that the animal itself possesses the family characteristics to a greater or less degree, but that it, in turn, will be able to transmit them. The common, or grade, cow may reproduce herself or she may not. The purely bred cow will be very likely to reproduce herself, possibly

with slight variations, under proper breeding.

In many instances farmers are too prone to send their heifer calves to the shambles at ordinary prices. Cows bought cheaply are usually esteemed cheaply—perhaps generally at their true worth—and frequently at less than the real value. Cows bought instead of raised for the dairy upon the farm break up the possible line of improvement as outlined above.

Paying cows in the open market to keep up the numbers of the dairy herd involves a haphazard course of management which ultimately ends in failure, because let us do our best, there is still an almost limitless beyond for improvement. All cannot buy blooded stock to build up our dairies, even if it were desirable. That is the truest economy which makes the most of what we have. The cow raised upon the farm is likely to possess characteristics better suited to that farm than those purchased.

L. F. ABBOTT.

EXTRACTS FROM CORRESPONDENCE.

FROM MONTANA.—The Tobacco plains are situated in the valley of Kootenai river, on the British Columbia line. This is a new settlement. The plains proper, on the United States side of the line, are about ten miles north and south by six east and west. They are very rolling, with some scattered timber, and are surrounded by mountains on all sides. There is some very good land subject to homestead and desert entry, but it will take capital to develop the country, as we have to irrigate everything we raise. The soil is very good, of a loose, ashy nature, underlaid with sand and gravel. Water is very hard to get on the land owing to the uneven surface of the country. Water is plentiful in the streams, but for domestic purposes is hard to get, as there is so much sand and gravel to contend with in digging. The principal crops raised are barley, oats, wheat, and potatoes of a very good quality. Hay is also raised to some extent, principally timothy. The standard fruits have not been tried to any extent, but what few trees have been planted and properly cared for look well. Small fruits do well. There is some fine timber—fir, bull-pine, tamarac, sugar-pine, cedar, etc. The streams are full of fine fish. There are some deer, elk and bear in the mountains. S. L. R. Tobacco, Mont.

SOUTH FLORIDA HOMES.—Throughout the world the South Florida home has become celebrated for its gracious hospitality, its beauty and comfort. A home in Florida means something very different from the significance held by the name elsewhere throughout the world. It does not mean a stern fortification against the rigors of winter and the burning heat of summer, a defense against terrific winds and blasting storms, a retreat from cyclones and snows and torrents of rain. Neither does it mean, as in the older settled countries, a measure of relief from a swarming population, an expression of triumph in the race for wealth or a competence, a triumph over one's fellows, a demonstration of respectable standing in a community with a respectful deference to that community's tastes, traditions and standards. The building of a home in Florida means an occupation so delightful that the only regret connected with it is that it should ever come to an end. The typical Florida home is not a structure, but a growth. It embodies the taste of every member of a family and answers all their wants. It is planned and laid out in conformance to no rule or custom, but it is a purely individual growth, an exponent of individual taste. Thus it happens, and rightly, that the architecture of the Florida home is as varied as the fancies of its occupants, and carries suggestions of the prevailing styles of the countries which have contributed to our cosmopolitan population. But the choice of architectural styles or the planning of a house is the slightest of consideration in the making of a Florida home, where everything out of doors takes rightful precedence over all within. In a climate where people may live for comfortable lifetime in a dwelling constructed of a single thickness of boards, and where a lady has lived for three successive winters in a charmingungalow constructed of cloth and roofed with straw matting, with an ample stone fireplace for use on rainy days, it is of slight consequence what one happens to have over one's head when the weather makes confinement indoors imperative. A house of wood or of stone or of canvas one may have anywhere, and unhappy the man or woman who is compelled to stay in it! It is the vines and blossoming shrubs one plants; the orchard which one nurtures, and which in turn supplies the beautiful table; the berry-patches with their loads of fragrant fruit; the dainty little vegetable garden, where every product is given due prominence and most favorable conditions; the great oaks which spread their grateful shade just where the tired worker loves to encamp; the charming walks laid out through pines or groves; the delightful views of gulf or bay or fruitful valley; the little secluded nooks by rippling streams; the bit of stonework overgrown with ivy; the long dreamy vistas under trees; the bed of violets in a moist corner; the roses radiant with ten thousand blooms; the rustic bridge—all the countless arts of the gardener, who is a poet as well as a tiller of the soil—which makes the best and most indispensable part of the Florida home. Some of these devices may be practised even on a tiny city lot, but the city is recognized in Florida as a necessary evil, and only the rich can establish genuine homes within its limits. Charming as are many of the home sites already chosen throughout our state, the ideal residence spots are yet ready to be chosen by the home-seeker, and may still be had for a song. The time will come when all the neglected heights along the gulf will be dotted with homes, and these oeries, vine-climbing and bloom-embowered, each with its bit of fertile land, producing fruits in abundance, will be eagerly sought as dwelling-places, and take honored place in the classics of the future. W. H. M. Jacksonville, Fla.

Affected Her Heart

Could Not Make the Least Exertion Without Difficulty.

"My daughter had a swollen neck and also had heart trouble. After the least exertion she won't breathe so hard she could be heard all over the room. Her limbs were badly bloated. Her father insisted that she must take Hood's Sarsaparilla and we gave her about six bottles, when she was cured and there has been no return of her ailments." Mrs. EMMA THOMAS, North Solon, Ohio.

Hood's Sarsaparilla

The best—in fact the One True Blood Purifier. Sold by all druggists. \$1; six for \$5.

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Our Farm.

NOTES FROM GARDEN AND FIELD.

KILLING WEEDS.—In these days of plentiful showers the job of keeping weeds under control is not exactly an easy one. We have to keep eternally at it, and when we think we have subdued them on a piece of ground by thorough hoeing and well-pulverized surface, then comes another heavy rain packing the surface and starting another lot of weeds from seed, or (as in the case of that pest with the nine lives of the cat, purslane) freshening up and reviving the plants that had been uprooted, but left loosely on the ground to die. This weed is especially pestiferous in the patches of pickling onions, and also of the large onions. We may think that we have the land all cleared from these weeds by hoeing and hand-weeding, but in a very short time during hot weather the plants overrun the whole surface to such an extent that you cannot see anything more of your onions. I had hoped to be able to kill the pest with heavy doses of salt, but this does not seem to have any more effect on the purslane in this direction as on the onions. My plan to subdue this weed in patches of close-planted vegetables is to have a careful man go through with the hoe, and let a boy with basket follow after him, picking up the loosened plants and carrying them out of the patch. I wish that we might be able to invent a more convenient method.

* * *

Where the rows are far enough apart to admit of cultivation by horse-power, I find the harrow, or spike-toothed cultivator (illustrated in an earlier issue as an ideal tool for the early cultivation of potatoes), as serviceable an implement as I have yet tried; but we must be prompt in its use, and not let coarse weeds, like redtop, pig-weed, dock, etc., get a firm hold in the soil. If a long-continued rainy spell compels us to delay cultivation until such weeds have become of some size, we may need a tool with sharp-cutting blades, which will cut the weedy growth an inch or so below the surface of the ground. I haven't home-made cultivator on the ground and use it for this purpose. It consists of an old-fashioned thill cultivator-frame, to which a piece of band steel, properly bent, is fastened in such a way that the knife part (which is kept sharp) will run parallel with and about an inch under the surface of the ground. (Will give a picture of this later.) It comes very handy for various purposes, especially also to keep walks and drives on the place free from weeds.

* * *

Of course, nothing can beat the plow as a weed-killer in the garden; and I use the one-horse plow whenever a piece of ground wide enough for plowing gets cleared off from an earlier crop. Where melons or squashes were planted between early peas, I like to plow the patch, throwing the first furrow carefully up to the row of vines, just as soon as the peas are removed; and this I do at once after the last picking, without waiting for the pea-vines to die down. It is a good plan to have the plow always ready in order to turn every spot over as soon as possible after a crop is off. It makes clean land, and usually I have some crop that I like to put in—turnips, winter radishes, spinach, late celery, kale, or if nothing else, barley and peas, or oats and peas—to feed green to my cows in the fall.

* * *

CHEMISTRY AND AGRICULTURE.—Evidently much in our chemical sciences is yet open to investigation, and a good deal in what we call "practical chemistry" consists of guess-work only. Anybody who reads the testimony of the medical and chemical experts in Batavia's "Canse Celebre," the Benham murder trial, cannot help but arrive at this conclusion. Doctors, as usual, disagree, and there will be no definite settlement of the question whether the woman died from prussic acid or from some other cause. In short, there are a great many things in chemistry and toxicology of which we have no definite knowledge or understanding. We use Paris green suspended in water or Bordeaux mixture. The fact that this poison will not dissolve, and when in suspension is liable to settle to the bottom, has always been a drawback. Agitators have to be called in use, and yet hardly ever

work to our entire satisfaction. Paris green is so heavy that it is bound to settle more or less. Now, we know that this poisonous substance dissolves beautifully in strong ammonia, and that this solution can be perfectly diluted with water. This solution has a bluish tint, and I believe is harmless to the foliage. Some of our fruit-growers have advocated and practised the use of dissolved Paris green in the Bordeaux mixture. I was in doubt about the advisability of this plan, and wanted to ascertain the exact chemical changes resulting from the addition of dissolved Paris green to the Bordeaux mixture. From the New York experiment station, in Geneva, I received the following explanation: "The copper is precipitated in the form of copper hydrate, and undoubtedly the acids that were in combination with the copper in Paris green combine with the lime. Therefore, when we add lime to the dissolved Paris green, all of the essential constituents are again precipitated, and we gain nothing by the operation." This is rather



THE LOGANBERRY. (ONE HALF NATURAL SIZE.)

indefinite; in fact, I can and will settle this for myself, whether the Paris green, when brought in contact with the Bordeaux mixture in this form, will settle as if in suspension or not. And I also shall try to ascertain whether the dissolved Paris green can or cannot be used in some way for the purpose of killing injurious insects to good advantage.

* * *

THE CRANDALL TREE-CURRENT.—My great complaint about the Crandall currant always has been that, though blooming freely, it failed to set fruit enough for even a fair test. Two years ago the introducer, Mr. Ford, of Ohio, called on me, and I much regretted that he did not find me at home, as I wanted to show him a row of the Crandall, and ask him whether there was any justification whatever to retain the worthless thing on the place. This year, however, I wish Mr. Ford were still here to see the load of fruit on the same row of bushes. They were severely pruned early last spring, and now the canes bend down to the ground overburdened with the now half-ripe berries of almost cherry size. I had attributed the barrenness to the Crandall, here and elsewhere, to the absence of suitable pollen. Like many other fruits the blossom of this currant may be self-sterile. This year, evidently, it had all the potent pollen that it needed. The next question is how to utilize the fruit in the household or otherwise.

T. GREINER.

ORCHARD AND SMALL FRUITS.

CONDUCTED BY SAMUEL B. GREEN.

LOGANBERRY.

I wish to state through the columns of your journal my success with the new fruit called the Loganberry. Four plants set fourteen months ago have yielded, up to date, seventy-three three-quarter boxes of large, handsome berries. They are a little tart for table use, but for jelly they are as good as the best, and for pies they are better. No hard seeds, and the flavor is good. Plants are twenty feet apart, and trained on a wire trellis. Some canes send a branch each way to the next stake, making forty feet from tip to tip. Have sold berries to the amount of four dollars

and fifty cents, and plants from tips, in March, to the amount of two dollars, making an income of six dollars and fifty cents from four plants inside of fourteen months.

Others may have done better, and if so, they should let it be known. My neighbors join in pronouncing the Loganberry ahead of anything in the berry line, and will verify all my statements. Could hardly recommend them for field culture or for shipping, as they are very soft; but for home use I think every family that can should have a few plants, and give them good care.

F. W. BURR.

California.

[This fruit is one of great promise for the middle states. Professor Stinson, of the Agricultural College of Arkansas, recently told me that it promises to become a market fruit of importance in his section, and similar reports come from Massachusetts and elsewhere. The fruit is like a red blackberry, being solid and of a bright red color. The plant has the habit

of the dewberry, but the foliage and wood are quite peculiar. It is a vigorous grower, and roots freely from layers. In Minnesota it has not done so very well at the experiment station, but it is probable that state is beyond its successful limit of culture.—S. B. Green.]

INQUIRIES ANSWERED.

Strawberries.—N. J. R. Thornton, Ind. Most of our strawberry-growers prefer to set the plants eighteen to twenty inches apart in rows four feet apart. The spring is generally considered the best time to set strawberries for marketing purposes, but plants may be set out in July or August, and give a crop the next year, though not so large a crop as if set in the spring. If at this time it was a question of a supply of berries for home use, I should set the plants this summer.

Pineapple.—M. M. Danenau, Texas. The pineapple needs a very moist, hot atmosphere, and does not succeed where the nights are cool or where dry weather is even occasional. On this account it has not been profitably grown in Texas or southern California. The only part of this country especially adapted to this fruit is southern Florida. But undoubtedly the pineapple could be grown in a small way in southern Texas by giving protection in unfavorable weather and by special methods of culture.

Raspberries on a Town Lot.—F. F. P., Troy, Kan. Probably red raspberries would pay you as well as any small fruit. I think you would best succeed with the Marlboro, but would also plant some of the Cuthbert; I think also that the Nemaha Black might do very well for you. Plant the red raspberries in the fall, if you can, and the black raspberry-plants in the spring; but either may be planted successfully in the spring. In selecting raspberry-plants it is very important to get only those that are from healthy stock.

Best Strawberries for the Northwest.—J. S. L. Carrington, N. D., and J. M. N., Amesville, Mont. I think that a beginner in strawberry-growing in your section would be most likely to succeed with the Crescent pollenized with the Bederwood, but I would also plant Haverland and Lovett. It is generally best to set them out in the early spring, but if you can get the plants near by it might do to set them out in August, though the weather is apt to be so very dry in your section at that season that they are very liable to fail. I think well of setting about the first of October, if the land can be had in good condition then, and on the approach of winter cover the plants with about two inches of soil. This covering can be raked off in the spring, and the plants will have a splendid start, and may be allowed to fruit a little the next year.

Pear-tree Failing to Fruit.—C. C. D., Marne, Iowa. It frequently happens that when pear or other trees are growing rapidly they do not flower or set much fruit, or the fruit is unusually small. The strong growth seems to require all the strength of the tree and to starve the fruit. Light summer pruning, which checks growth, will often cause fruit-buds to set, and when the trees get older they will sometimes hold their fruit when they had been dropping it before. But the cause might be the absence of the proper pollen or some insect or disease. I cannot answer in regard to these without a specimen.

Budding Peaches.—J. H. L. Redfield, Kan. Better bud your seedling peaches in August if they are growing well. We have no space at this time for an article on budding, as an article on this subject was published last year. It seems to me, however, that you ought to have a little book on this and kindred subjects, and I recommend you to get "Amateur Fruit-growing," for sale by the Farm Stock and Home Publishing Company, Minneapolis, Minn., at fifty cents, post-paid. It treats of budding and grafting at much length, and is well illustrated. It also treats of the growing of the fruits of the northern states.

Ants at Tree-roots.—J. L. Auburndale, Wis., writes: "How can I drive ants away from the roots of my apple-trees? They start an ant-hill among the roots, and kill the tree in one season. I have soaked them with kerosene, but I think that injures the trees."

REPLY:—The best way is to buy a pint or so of crude bisulphid of carbon. Saturate a bunch of loose cotton as big as an egg with it, and place it in a small hole in the ant-hill, and cover the whole with a spadeful or so of earth. This material is much like gasoline in appearance, and evaporizes more quickly, and the vapor will kill the ants. It is about as liable to take fire as gasoline, and consequently must be handled with some care.

Cutworm-moth.—C. B. S., Moline, Tenn. The moth you inclosed was broken beyond all recognition, but from your description and the few large pieces received I am very sure that it was a cutworm-moth and that you were troubled with a multitude of them this year. They have been very bad elsewhere. In large fields there is practically no remedy, but in gardens they may be kept in check by hand-picking, by fencing them out with paper or pieces of tin put around tomato, cabbage and such plants. Another remedy is to dip fresh-cut green clover into Paris green and water and scatter it in the rows of garden-plants. The worms will eat this in preference to most other kinds of food, and will crawl away and die. The cutworm lays its eggs in the summer and autumn in grass-land and in fields that have their food-plants on them, and they consequently are liable to lay them in weedy places, for the young eats in the same way at this season as in the spring, and as there is no tender garden stuff, it feeds on young grass and weeds. On account of this, if the garden land is kept free from weeds in autumn, no eggs will be laid in it, though the worms may enter gardens from nearby grass-lands or waste fields, but they never travel through long distances.

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Our Farm.

THE POULTRY YARD.

Conducted by P. H. Jacobs, Hammonton, New Jersey.

LANGSHANS AND WHITE WONDERS.

THE great object of all who seek a good breed of fowls is to obtain the best layers and table fowls combined, and have them hardy and easily kept. That such a breed is not known is true, because a good table fowl is not always a good layer; but there are one or two breeds, however, which will excel others in coming the nearest to possessing the three qualities mentioned. Of the breeds that have not received the attention it deserves the Langshan may be mentioned. It is a hardy, active, vigorous bird, high up in the list of layers, and next to the Games and Dorkings for the table. Now, as there are always some defects, the Langshan does not escape, but the objection is a very weak one, and does not impair the usefulness of the bird in any respect, and that is it has black plumage. The skin is white, however, the breast is well filled with meat, and it has no drawbacks other than the one fault named, which should not be a barrier to its popularity. There is also another breed, a new one, which originated in New England, known as the White Wonder, which is fully the equal of the Langshan for eggs and the table, its plumage being white. It may be safely claimed for it that it will some day be a very popular fowl, but it has not yet been accepted by the American Poultry Association as a standard breed, many supposing it to be a cross of White Wyandotte and Light Brahma; but it holds its own nevertheless, and is being distributed over the whole country. As a cross on half-bred White Leghorn hens the use of the White Wonder male would give good results, and a Langshan male with any kind of dark hens, where a cross is desired, would be an improvement; but it is better to use pure-bred Langshans and White Wonders, both male and female, than to resort to crossing.

THE COST AND PRODUCTION.

Foods are cheap only in proportion as they reduce the cost and increase the profits. If the hens do not lay, no kind of food need can be considered cheap; but if they produce eggs then the food is cheap, no matter what its cost may be, as the capacity of consumption on the part of a flock is limited. If a hen lays two eggs a week, the first egg will about pay for the grain food if prices are high. If the hens can be made to lay three eggs a week the profit will be doubled, though the hen performs only one half the work additional. Now, every poultryman and farmer should aim to get that one extra egg a week, as it will make a great difference in the profit from a large flock. If a quart of grain is reduced to one pint, and one half pound of ground meat substituted for the pint of grain removed, the cost of the food will be but slightly increased, but the effect on the fowls may be an increase of eggs, because they require a substance not supplied by the grain, but which is found in the meat. The same rule applies to clover hay. It contains a large proportion of lime for the shells, and also promotes digestion. It is cheap and wholesome, and will cost even less than grain. The majority of farmers content themselves with throwing out a mess of grain in winter, and look for good results because they do not neglect their fowls; but while the grain assists in keeping them warm, yet the successful farmers will be those who use grain and give also a variety of other foods to poultry.

PIGEONS IN CONFINEMENT.

Pigeons will give a large profit if they are properly managed, but they will prove disastrous to poultry unless they are kept in a manner so as to separate them from the fowls. If they fly over the farm or into neighboring yards (which they will always do if food can be procured therein), they bring lice and disease back on their feet and bodies. To be successful with pigeons, have a suitable house for them, and large, high yards, covered, made of wire. Under no circumstances should they be allowed outside. Have the sexes equal, as a single extra male will break

up the matings, and keep the colony in a perpetual turmoil. Have the roosts high and the yard deep. Provide water and gravel plentifully; also ground oyster-shells, and hang up a salted codfish for them to peck. The food may be varied, such as wheat, cracked corn, cut clover, ground bone, ground meat, cabbage, buckwheat, etc., being used, and care must be exercised in cleaning the quarters and nests in order to avoid lice and disease. One pair should produce at least eight pairs of squabs a year.

ROUP IN SUMMER.

Any disease in the flock that does not readily yield to treatment in summer will certainly not be absent in winter. Those who prefer to work with a flock having the roup will spend a large share of their time in winter attempting to cure diseases that are really incurable. When a contagious disease attacks a whole flock, and the fowls recover slowly, it is better to destroy them at once, as a flock so unfortunate as to have a persistent disease among its members in summer will never be worth the room they occupy on the farm. This is the season of the year when prevention will be in order. Never carry over into the winter a fowl that has been sick for any length of time, and get rid of all birds that are weak or not in excellent health, as one sick bird is the beginning of disease in the flock. If the flock is disposed of, do not bring other birds on the farm until a sufficient length of time has elapsed to permit of thoroughly disinfecting the poultry-house and grounds, and before procuring other birds be very careful to know something of their condition and previous surroundings.

GREEN FOOD.

The best way to supply green food for fowls that are confined in yards is to have two yards for each flock. In one of them may be grown any kind of green food, such as oats, rye, wheat, corn, mustard, millet, etc. Such foods need not be grown more than a few inches high. Turn the fowls on the green food, and then sow the other plot, so as to permit it to grow during the time the hens are consuming the green food on the first plot. In this manner a large amount of green food can be provided at a small cost. It is not only the large animals that improve and give good results on grass, vegetables and clover, but the hens will also be benefited as well if given the liberty of the clover-field. It will not be necessary to feed fowls in the summer if clover is plentiful, and the early crimson clover is superior to rye for them. It is well to give a grass-plot, but nevertheless a grass-plot in which clover predominates is better than one of mixed grasses. The large proportion of nitrogen and lime in clover will induce the hens to lay through the whole season until they begin to molt.

MAKING A SELECTION.

Before condemning a breed perhaps it may be your fault of selection that caused failure. Every farmer who selects a breed looks for the "best layers" instead of the "best fowls." The main point is to secure some breed that is known to be hardy and free from disease. If the fowls are to be confined, the best breed is one that does not fly over a fence. If there is a range, the best breed is the one that is active and forages. When you have gotten the best breed for your climate you will then have the best layers, as birds that are healthy and kept under conditions most favorable for them and you will produce the most eggs.

VARIETY IN FEEDING.

Much of the advice given regarding feeding makes the labor side of poultry-keeping uninviting to one who is not accustomed to poultry other than to expect them to do a portion of the work of making a living by foraging. But the fowls require a variety, and it must be allowed, or there will be a shortage in the egg-basket. Every farmer feeds corn, and believes in it. To attempt to keep corn out of the ration would be an arduous undertaking. What to do is not difficult to learn. Feed corn one day, wheat the next, oats the next, buckwheat the next, and give these grains at night scattered over the ground or in litter. Give during the mornings a mess of mixed ground grain, which will not require much labor,

but let the morning meals be varied also by adding ground meat, cut clover, cut bone and meat, cabbage, cooked potatoes or turnips or anything preferred, not overlooking linseed-meal, but it is not at all necessary to give the foods as a mixture—every kind at a meal—but one to-day and another to-morrow, in order to avoid the sameness of diet.

WHY HENS DO NOT LAY.

When the hens do not lay there is a cause, and it must be discovered. At this season, when the weather is warm, the fault is in the feeding. How may it be known that the management is incorrect? By simply observing the fowls. If an egg has a soft shell it is a sure indication that they are being overfed. When such cases are noticed the poultryman begins to give oyster-shells and other substances in order to provide lime, but finds such remedies failures. The hens are too fat, their organs are obstructed, and they cannot produce eggs. The remedy is to give no food at all for several days, and then feed but little. Of course, such method will further reduce the number of eggs, but unless the hens are reduced in flesh they will not only cease laying altogether, but die off. The courage to resort to the heroic remedy of withholding all food is lacking with the majority, but when the hens do not lay the best plan is to get them back to a laying condition or suffer a loss, and to do this the only available method must sooner or later be accepted.

REMOVING SITTERS.

When a hen desires to sit she will do so where she has deposited her eggs, but such a location may be wanted for the layers, thus necessitating the removal of the sitter to a new location. To do this, it should be the object to deceive her. Prepare a neat box exactly like the one she may be occupying, and carry her on the nest to the selected location at night, giving her a full clutch of eggs, and keeping all other hens away from her. She will not notice the change during the night, and if she is kept closely confined on the nest for twenty-four hours she will become contented. Feed her once a day, giving corn, wheat, a little meat and chopped cabbage or cooked potatoes. When the chicks begin to hatch it is best not to disturb her until all are out, as she may abandon her nest too soon. When she comes off give her and the brood a warm, dry place.

SHIPPING TO COMMISSION MERCHANTS.

If you ship to a commission merchant first endeavor to learn if he is reliable. All merchants of reliability are known, and it will not be difficult to find them. Before you ship to him write him (if you have choice poultry and eggs) that you will send him something better than the usual line, and that you expect the highest prices. If he finds your statement true he will keep you in view, and he will soon begin to write to you for more. The merchants are only too anxious to secure the best to allow opportunities to escape them for securing such.

DUST BATHS.

In summer the best dust baths are made by spading places in the yard, each about one yard square and ten inches deep. If stones are in the dirt it should be sifted. Make the place where the sun can shine on it, so as to keep the earth dry, and after every rain the dirt should be turned over with a spade or fork. Care must be used in having the dirt fine and free from pebbles, or the hens will not use it. If they can have such a place in which to dust themselves they will easily keep their bodies free from lice.

LANDS FOR SALE.

AT LOW PRICES AND ON EASY TERMS. The Illinois Central Railroad Company offers for sale on easy terms and at low prices, 150,000 acres of choice fruit, gardening, farm and grazing lands located in SOUTHERN ILLINOIS. They are also largely interested in, and call special attention to the 600,000 acres of land in the famous YAZOO VALLEY of Mississippi, lying along and owned by the Yazoo & Mississippi Valley Railroad Company, and which that Company offers at low prices and on long terms. Special inducements and facilities offered to go and examine these lands both in Southern Illinois and in the "Yazoo Valley." Miss. For further description, map and any information, address or call upon E. P. SKENE, Land Commissioner, No. 1 Park Row, Chicago, Ill.

PROVIDING LIME.

Both oyster-shells and ground bone contain lime; they will serve as grit, and are highly relished by fowls. Bone, however, is digestible, and is used as food, while the oyster-shells serve more in a mechanical manner by assisting to grind the food, being somewhat better in that respect than bone, because of having sharper edges for cutting. Oyster-shells are very cheap, and there is no reason why they should be overlooked. They should be in every poultry-yard, as they serve to promote digestion by enabling the fowls to more perfectly grind their food.

INQUIRIES ANSWERED.

Blindness.—J. S. B. Kingston, R. L., writes: "Why do chicks become blind, though otherwise apparently well?"

REPLY:—It is probably due to exposure to overhead drafts at night during damp weather, the eyes becoming inflamed from cold drafts.

Results of Heavy Feeding.—K. P., Forsyth, Mont., writes: "My chickens are weak in the legs, and some of them lay very small eggs. I feed corn, oats, meat, table-scraps, etc."

REPLY:—The cause is due to heavy feeding on grain during the warm season, the fowls being very fat.

Dorkings.—L. P., Anniston, Ala., writes: "Which variety of Dorkings is the largest, and is it adapted to the South?"

REPLY:—The colored variety is the largest. Dorkings are adaptable to all sections, but are somewhat tender when young. They are the best of all table fowls, but are not equal to some breeds as layers.

Feather-pulling.—M. E. T., Johnstown, Pa., writes: "What is the cause of chickens picking their feathers, and what is the remedy?"

REPLY:—It may be caused by lice, but is usually a vice or habit that is acquired. No remedy is effectual, the difficulty being to apply one. It is usually due to idleness; such birds should be destroyed.

Gape-worms.—W. H., Tingley, Pa., writes: "I wish to know how the gape-worm gets into the windpipe of chicks, and what remedies will reach them."

REPLY:—The gape-worm passes through several stages of existence, as yet not perfectly understood. It seems to exist on old farms rather than on new land, and especially where fowls have been kept for years. The conditions favorable for earthworms also favor gape-worms. The usual remedy is to give one or two drops of spirits of turpentine on a bread-crumbs; but the better plan is to draw the gape-worms by inserting the tuft of a small feather into the windpipe.

KENNEDY, TEXAS.

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Yours truly, (Signed) S. C. BUTLER.

For Sale 40-acre farm, 20 acres cultivated, 10 acres timber. Good buildings, fences and well. Get particulars. Also four 3-month-old Poland China Boars, price \$5 each. G. G. MOORE, Namur, Door Co., Wis.

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IT DON'T PAY to keep hens and lice in the same coop. You can separate them with LAMBERT'S DEATH TO LICE, a cheap and effective remedy for all poultry vermin. It soon turns loss to profit and saves poultrykeepers many times the cost. Catalogue Free. Sample box 10 cents postpaid. 100 ozs. by express, \$1.00. D. J. LAMBERT, Box 308 APPONAUC, R. I.

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DE SAAG THOMPSON EYE WATER

"I met a man yesterday," writes Mr. A. J. Stimson, Elk City, Kansas, "who said he would not take ten dollars for his copy of Peerless Atlas, if he could not get another, and that his boys at school had got 100 in their geography examinations ever since he had it. He wondered how Farm and Fireside Atlas could be sold at \$1 for the combination." A wonder it truly is, but most remarkable of all is the liberal commission allowed canvassers for this and our other unrivaled combinations. Write the publishers of this paper for particulars.

Our Fireside.

A SONG OF THE WORLD.

"World ain't what it used to be," you'll hear a feller say,
As he crosses of his legs and heaves a sigh;
But it happens she's the best world that she's ever
been to-day,
And she's whirling—just a-whirlin' round the sky!

The stores give bigger measure—
The mines a sight o' treasure;
There's more o' love and pleasure
In the land;
The skies are mostly sunny—
You jingle more o' money,
And the brown bees bring their honey
To your hand!

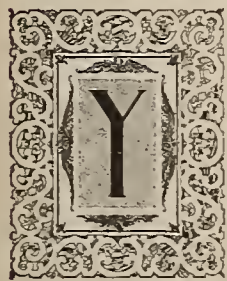
"World ain't what it used to be!" Of course it ain't,
because
It's cuttin' out a newer kind o' way;
It ain't got time to worry 'bout the kind o' world it
was,
For it keeps a-gettin' happy on the way!

Brighter blossoms twinin';
Brighter suns a-shinin';
What's the use in pluin'
And whinin' through the land?
Skies are mostly sunny;
You jingle more o' money,
And the brown bees bring their honey
To your hand!

—Frank L. Stauton.

Thumb-marks o' Bascombses.

BY MAUDE MORRISON HUEY.



YES, an' you had the ole poster bedstead, Luviny Bascomb, an' the dozen best linen sheets an' pillow-cases that was her own hand doin', now the idee o' your goin' an' cuttin' that plaid black-and-white shawl clean into the middle, when the whole on't won't make a decent comf'ter. I sh'd think I might hev the shawl when you think o' all the white lace nightcaps an' kerchiefs, 'sides that black merino as good as new, an' all that yard-wide tattin' you've poked down into the bottom o' your trunk 'thout sayin' 'boo' t' nobody.

"I s'pose them chiny cups an' sa'cers is your'n, too, hain't they? An' you'll be split-tin' that big 'arthen platter that's come down 't Bascombses f'r five generations that I kin count; first, 'twus a part o' great-great-gran'mother Bascomb's settin' out, she whose maiden name was Hicks; then 'twus handed down to her son Hiram, as married a Pease, our great-gran'mother Sary Ann Bascomb; then 'twus give t' gran'pa an' gran'ma Bascomb as a part o' their dowry, an' it held the chicken at their weddin' dinner; then it come down t' pa as the only livin' one o' the Bascombses. Now, I s'pose we'll hev t' split it, Luviny, I don't see no other way.

"That bronze pitcher that was bought f'r Aunt Luviny Cruet, as died, I s'pose that'll be yours, too, 'long with the 'arthen pitcher, seein' you was 'er namesake."

"Well, s'posin' 'tis, jest 's if you didn't hev the calico-covered rockin'-cheer that she allus sot in by the window; an' the browu leather Bible that bears the finger-marks o' Bascombses clean up t' Uncle Jedadier Andrew's time. He bought it f'r his mother in her last sickness, she as was a Bascomb by birth. I don't see's you need t' talk, Luvilly, you've gobbled up 'bout your sheer.

"I s'pose you've plum forgot mother's spinnin'-wheel an' the fine linen towels an' table-cloths she spun the flax f'r with her own fingers? What you done with 'em, Luvilly Bascomb? Didn't think I'd find 'em poked 'way down in the ole cedar chest. Yes, an' the only livin' pictur' o' gran'pa Bascomb, an' his sister 'Liza that died? Well, I found 'em, an' more'n that, Miss Luvilly, mother's lavender weddin'-dress that was real silk, an' was two dollars a yard, ever' stitch on't tucked off into that ole hole where the moths could gnaw the whole front breadth clean out of it. I've put it into my trunk now, where it's half-way white t' keep it, an', thank goodness, it'll stay there a spell."

"Now, if you've went an' locked up that dress, Luviny Bascomb, you'll jest oulock it ag'in double quick. I hain't goin' t' stan' no sech hoggery. If you hev that crazy-quilt, 'ith silk pieces that was saved up by gran'ma an' Aunt Jernsha Rusk, an' ever' one o' 'em a hist'ry as long as my arm, I'll jest hev that weddin'-dress, an' I'd like t' see you hinder, so!"

"Well, I'd like t' see you git it, Luvilly Bascomb, whilst I carry the key; 'sides, if you want t' make sech a fuss over a little piece o' bacon, an' hev a reg'lar up-an'-up jangle, I kin go down in the ole house where gran'ma an' gran'pa lived. I'd as lief as not, anyhow. I allus said 'twus 'nough sight comf'tablen' this, f'r there's them two big front winders s' cheerful. Mebby I'd hev a minute's peace, if nothin' more."

"Yes, I s'pose you'll tote over them dot-muslin curtains o' gran'mother's t' string up

to 'em. I've noticed you've been uncommon anxious t' hev 'em out bleachin' ever' sunny spell."

"Well, s'posin' I do, they hain't no more 'count than mother's corded bed-spread all made in grape-vine pattern, that hain't t' be found hide n'r hair o' no'ers, es I kin see."

"But you wouldn't never 'a' knowed it wa'n't t' be found hide n'r hair of if you hadn't been a-searchin' it f'r your own self, Luviny Bascomb, that much is plain. An' if you choose t' git up on y'r ear, you kin git down ag'in, that's all I've got t' offer. You kin go, an' when you git sick o' livin' down in the holler 'long 'ith the mice an' the hoot-ows, you kin come back. 'Twon't be no odds t' me one way 'r t'other."

And so the old house was riddled and ransacked. The tall four-poster bed, with its fathomless feather mattresses and comfortable linen-cased pillows, was moved down into the hollow, along with half the china cups and saucers, the earthen platter and dot-muslin curtains.

The weather-beaten frame building upon the hill wore a doleful aspect. A painful silence followed the thud of Miss Luvilly's coarse shoes as she moved about from one bare room to another.

There the white china vase that had held the white lilacs and roses on mother's coffin, missing from the little calico-covered mantle; here a familiar family picture removed from the wall, where it had hung for generations; an empty nail where had hung a half-worn garment, sacred for its associations; a vacant corner where had stood a homely, time-worn chair, all added to the air of desolation and loneliness.

Miss Luvilly went over to the bare little sitting-room table, and rearranged the Bible, the red plush album and "Pilgrim's Progress," that remained as her share of the old books, "thumb-worn by Bascombses," into a less lonesome group, and brushed a fleck of dust from the pictured face of Grandma Cruet, who looked forlorn, indeed, standing alone upon the mantel that had held her and grandpa side by side in frames of the same design for so many years.

But most of all, Miss Luvilly missed Debby Ann, the big motherly tabby, who had been hers and Luviny's pride since the day, when as a wee scrawny kitten, it huddled at the door-step, and mewed for admittance.

They had never thought to contend for her ownership before. When Miss Luviny's fat, pudgy little body was not to be found in the soft-cushioned rocker by the window, and there was no chance for a romp with the balls of gay blue and red worsteds always to be found in the mysterious depths of her work-basket, Debby Ann was quite as well content to cuddle down in Miss Luvilly's lengthy lap, and let Miss Luvilly's long, thin fingers soothe her to sleep. But now, "She's mine," said Miss Luvilly, "f'r 'twus me that fed 'er as a kitten, an' nursed 'er up t' live. She'd 'a' died that first night if I'd 'a' left 'er tucked off in that ole basket as you wanted me to. Didn't I take 'er into my very own bed, an' warm 'er up, poor little froze critter; an' now you go an' claim 'er, Luviny Bascomb."

"She b'longs t' me if she b'longs t' anybody," said Miss Luviny, hotly. "Who see 'er first, I'd like t' hev you tell? Didn't I fetch 'er in in my very own apron, an' wouldn't she 'a' froze if I hadn't 'a'? She's mine b' right o' sight."

"Yes, she's your'n b' right o' sight, ye might better 'a' said. Well, if you've got t' take 'er, take 'er, an' I hope she'll scratch the daylight out o' ye, Luviny Bascomb, 'fore ye git 'er home, so!"

So the old shaving-box behind the kitchen-stove was empty, and no one came to lap up the saucer of creamy milk that Miss Luvilly hadn't the heart to throw out. There was no one to know how many tears had been wiped away on the hem of Miss Luvilly's blue apron, or how many times she had unconsciously gone to the door, and begun calling, "Kittie, kittie," in an absent-minded way. There was no one to know.

The old house was strangely silent, only now and then would Miss Luvilly's shrill, wavering voice start out through the doleful measures of "Nearer My God to Thee" or "Blood of Calvary," hesitating uncertainly over the high measures, and pausing altogether when she came to the chorus, where Luviny had been wont to join in with her hearty, jingling tones.

And Dollie, Miss Luvilly's pet cow, refusing to eat the fresh, crisp grass that grew at her very feet, stood at the pasture-bars, and moored mournfully for her twin sister, Daisy, who was so near her counterpart it was impossible to tell which was Dollie and which was Daisy, except by the small white spot that adorned the tip of Miss Daisy's tail. But Daisy belonged to Miss Luviny, and the same pasture that had held them both from calves had all at once become too small; so Dollie stood alone at the pasture-bars, and moored, and listened for the answering echo that now and then came floating up from the old south lot, that had been Grandpa Bascomb's pasture fifty years ago.

A discouraged little streak of blue smoke, uprising from the damp, moss-grown chimney down in the hollow, told where Miss Luviny fried her solitary supper. Miss Luvilly

upon the hill saw it, and wondered what Luviny would have for her first supper alone, and if she would forget to salt the potatoes. Would she think to freshen the ham?

"For she don't know no more 'bout cookin' than an ole settin' hen," declared Miss Luvilly. "She'd allus rather knit 'er finger's length on a stockin' than make a pie, an' land knows I'd as lief let 'er. I hain't no notion o' how she'll manage. She'll like as not git as lean an' scrawny as I be, an' she the only fat one o' the Bascombs. It must be real spookery livin' alone down in the holler; but then she's got Debby Ann."

"Anyhow, she started it. She no need t' 'a' went, I don't feel no ways beholdin'. If she chooses t' make 'er bed down in the holler, she'll hev t' sleep in the holler, I s'pose. If she thought I was goin' t' sot 'round 'ith my 'hands in pocket, Sam,' whilst she laid holt o' ever' blessed thing that was worth layin' holt of, she got disappointed. They're as much mine as they be her'n. I don't b'lieve in no sech selfishness."

And "she started it," declared Miss Luviny down in the hollow, as she sat and drank her cup of half-steeped tea by the side of the rusty little stove, that would smoke in spite of all she could do, and ate the white bread that remained as "her sheer" of the Monday's baking.

"I never did see the beat o' how things act," she declared, while a weary little pucker distorted her round, placid countenance. "Now, that stove, it acts f'r all the world 's if 'twus persect. I don't care, I wouldn't fuss no longer, a-blowin' m' lights out over sech a contrary fire, not if I starved, so there. I'd drirk dish-water first, might 'bout 's well as this stuff. I don't call sech puny-lookin' stuff tea. I was goin' t' hev aggs," she said, as she let her eyes rove over the bare little table that was spread with a snowy linen cloth, "that was her own hand doin'."

Debby Ann, refusing to eat the milk placed for her in one of the blue china saucers, sat on the window-sill looking disconsolately from her mistress's face to the gray, home-like house on the brow of the hill, now and then mewing uneasily, and going over to reach her white paws up into Miss Luviny's lap.

"Now you go t' actin' up," said Miss Luviny, impatiently. "Go 'long an' eat y'r milk, I wouldn't be sech a gump."

"'Twa'n't natur' thet I should set 'round 'ith all them things goin' t' rack an' ruin, the linen a-yallerin' an' a-moldin' an' ever' blessed thing gnawed up 'ith the moths; 'sides, I didn't take more'n my sheer, an' Luvilly needn't t' say it. If she hadn't 'a' been so overfeared thet somebody'd git the best of 'er she wouldn't 'a' found half the cause t' grumble she did. Anyhow, I hope she'll git 'nough o' livin' up there in that great barn of a house. She'll find out she's a-bitin' off 'er nose t' spite 'er face. I don't care, 'tain't a-pesterin' me a mite. I kin stan' it as long as she kin. I reckon 'tain't 's if I wa'n't able t' butter m' own bread."

That night she crept into the great poster-bed that had been upreared in the damp, gloomy room where Grandma and Grandpa Bascomb had died, and lay and shivered underneath the crazy-quilt, whose silken pieces had each a history as long as your arm, listening to the soft, stealthy footsteps of Debby Ann, who moved restlessly from room to room. Lay and listened to the mysterious tap, tap, of the white honeysuckle-vine, whose long, green fingers reached out to touch the pane.

And up on the hill Miss Luvilly lay peering out of her white frilled nightcap into the darkness, and wondering if Luviny had been silly enough to leave her door unlocked.

"There's no tellin' what mightn't t' happen," she said, "an' she that big a fraid-cat she'd go clean out o' her wits. Things seem t' me kind o' onearthly ti-night, anyhow. I feel right in my bones that somethin's goin' t' happen," and the thin, lank figure tossed restlessly to and fro, with senses quickened to catch the least rattle of the loose clap-boards that decorated the weather-beaten walls, and trembled at the grating click of the gate-latch.

"I shan't give in," said Miss Luvilly upon the hill; and "I shan't give in" said Miss Luviny down in the hollow. And so it went on from day to day, and as the sense of loneliness increased, so did the feeling of bitterness.

"She's a hateful ole thin'," Miss Luvilly declared, as she watched a familiar blue gingham bonnet bobbing about amongst the green pea-vines that they had sown and tended together all the season; with never so much as a nod toward the lean little body plainly visible in the kitchen window.

"She never would 'a' thought o' peas f'r dinner if I hadn't 'a' been out pickin' some. Wonder what she's goin' t' do with a whole dishpanful? Live on peas f'r a month, I should say b' the looks. Never mind, she won't git no green cucumbers. I see 'er lookin' that way kind o' wishful. Guess she'll look f'r awhile. They're ever' last one o' 'em sliced up in my grape-leaf pickle-dish, so."

"She's as close as the bark t' a tree. I never knowed a Bascomb could be so can-i-vin'," said Miss Luviny down in the pea-

vines. "I s'pose she's 'fraid I'll git more'n my sheer, standin' there 'ith never a word, countin' ever' last pea as fast as I pick it. Never mind, I shan't be skeered out b' her. I'll take all the more, see if I don't," and she heaped another handful onto the already loaded pan. "They're as much mine as they be her'n. I s'pose I'll hev t' git 'round an' pick my sheer o' them strawberries if I want any. 'r there won't be 'nough left f'r a smell. I'll jest hev a strawberry shortcake f'r dimer this very day; so now, that'll be somethin' Luvilly won't hev."

"Cucumbers don't seem t' hev no relish this year, they taste flat. I might 'bout as well 'a' left 'em on the vines. Wonder if it's the kind? They're the long green, though, same's I've allus planted," said Miss Luvilly, as she sat down to her solitary meal.

"I wonder if Luviny thought t' cook her peas 'ith milk? Don't seem t' me that they're 'it t' eat no other way. I'll bet a cent she didn't season 'em, nohow. She's the biggest gump 'bout cookin', Luviny is. I swan! I b'lieve I'm comin' down 'ith spring fever 'r somethin' 'r other," she added, as she pushed her half-emptied plate impatiently away. "I hain't no appetite. I'll hev t' steep up some spring bitters 'r I'll be right down flat. I allus hev a spell 'bout this time o' year."

"Wonder what 'tis I forgot t' put in," said Miss Luviny, as she choked down a spoonful of overboiled pea soup, and took a drink of tea to rinse her mouth. "Don't seem t' me they taste like Luvilly's. 'Tain't salt. I know I salted 'em, an' land knows they're peppery 'nough. It's too early t' eat, anyhow, I hain't never hungry this time o' day. I b'lieve I'll save my shortcake f'r supper, 'twould be a shame t' cut it. Wonder if Luvilly's had a smell o' shortcake this season," she mused, as she set the juicy dish back on the pantry shelf, and ladled out a generous saucerful from the swimming tureen of peas for Debby Ann.

"Well, if she bankers f'r strawberry shortcake she kin help herself. I didn't take all of 'em, though 'tain't sayin' I hadn't ort to. I don't believe Luvilly'll eat 'nough t' keep a chick-a-dee alive, that's what I don't. She allus was the biggest gump 'bout eatin' 'lone I ever see. If I ever happened t' be gone a meal-time she'd jest half starve herself, f'r she said 'twan't worth while t' fuss f'r one. She never did hev an overly scrumptious appetite, Luvilly didn't. She's jest persect t' hev somebody t' fuss over, anyhow, like an ole settin' hen. She seems jest lost when ever'budy's offen 'er hands. I s'pose she'll peak up till a body kin see clean through. Land knows she's peaked 'nough now 'thout any spell o' fastin'. But then I don't feel beholdin'. When she gets tired o' her bargain, all she's got t' do is jest t' say so; but I s'pose she's got s' much Bascomb spunk she'd die first. Luvilly can't deny that she's contrary."

"Now, I wonder who that is," said Miss Luvilly one morning, as she peered through the parted curtains of the west window down the long yellow road.

A lumber-wagon came jolting noisily along, the heavy farm-horses kicking up a cloud of white dust as they came.

"'Tain't none o' the Dobbsses n'r the Gibsons, an' can't be it's none o' Deacon Wilson's folks. Bless me, if 'tain't Jonathan Bush's team, an' yes, it's the poorhouse-master as sure as I'm born, an' who's that little mite in pink calico he's got perched up aside uv 'im? It's Bessie Burgess, as I live. He's takin' 'er t' the poorhouse. Well, if I ever! Now, it must be that Miss Burgess has been took sudden. I heard last week she wa'n't hoped for much, she was that low with consumption."

"Poor little motherless young un, she looks 's if the witches hed 'er. Wonder if anyhudy's took pains t' comb out that hair since 'er ma took sick? 'Purty neighbors they must hev. If I'd 'a' knowed things was in that how-de-do, I'd 'a' went over if it hed been ten miles."

"The little thing looks 'bout half starved. I don't actually b'lieve that young un's had a square meal that she kin remember, so. She'd be real purty if she's fatted up some. There's nothin' like starvin' t' take the looks out o' folks. Her ma, now, I kin mind 'er as a gal, she was as purty an' pink; but she's looked mostly like a walkin' skeleton since she up an' married Abe Burgess. That young un looks f'r all the world like 'er, an', dear me, suz! her little bones is fairly a pickin' through. I've heard folks say as the town hes kep' 'em all winter."

"I wonder if Luviny'll see 'er. If she does, she won't rest a minute a-thinkin' uv it. Poor lone lamb! An' the county-house—I don't b'lieve Luviny'll ever hear of it, so."

Meanwhile, the great farm-wagon rumbled down into the hollow.

"It's a sin an' a shame," said Miss Luviny, shading her eyes from the sun with one fat hand. "An' I've heard say as they 'bused young uns somethin' frightful since Jonathan Bush got put in. I don't see what Luvilly was thinkin' of, an' she such a chick-en-hearted mortal, allus a-babyin' an' a-fussin' up ever' sick duck 'r dyin' goslin' the place afforded. I don't b'lieve she ever saw 'em so, 'r she'd 'a' had 'er right in a-coddlin' an' a-stuffin' ever' last thing down 'er that

wus eatable. Poor young un, she looks 's if she needed somebody t' stuff 'er. Luvilly's got a nack o' doin' sech things."

But the heavy bay horses trotted clumsily by, and the frail little heap curled up in the seat beside the poorhouse-master turned lounging blue eyes towards Miss Luviny's front porch, and the pink, sweet briar-bush that Grandma Bascomb had planted beside the door-stone.

"She'd be a heap o' company, anyhow, an' it's Luvilly's natur' t' fuss. Seems t' me she'd 'a' thought of it 'erself," said Miss Luviny, as she resumed the work of washing the breakfast dishes. "I don't mind f'r m'self, an' I wouldn't give in; but mebbly it makes some diff'rence my havin' Debby Ann. I'd feel easier in my mind if Luvilly'd take 'er. She's sech an' ole goose 'bout bein' alone. Now, it's diff'rent with me. I hain't the least mite skeery," and Miss Luviny brushed away the crumbs from her white table-cover with a self-satisfied air, and for a moment felt herself to be very brave.

"An' more'n that, somebody'd ort to. I'll jest be ha'nted 'ith the look o' them blue eyes, her eyes an' hair, all yell'er an' fluff'y, reminds me f'r the world o' Cousin Cornelia Bascomb's little gal thet died. I'd feel like an up-an-up murderer if I let them poorhouse folks git their claws on 'er, a-knowin' as I do that all they want is t' work the daylight out o' 'er, an' what they can't work out they'd prob'ly pound out. I heard Grandma Jennin's say they pounded that little Aimes young un t' death, an' I don't doubt it a bit. An' the thing of it is, who's t' do it if I don't?"

"It's diff'rent 'bout me," said Miss Luvilly upon the hill. "Luviny hain't used t' doin' alone, a bigger baby never lived 'u her, an' I've made a fool o' 'er, I s'pose. She hain't used t' goin' ahead, an' I'd as lief let 'er foller after; but what she'll do now I hain't no notion. 'Twould be a pile o' satisfaction t' me jest t' know she wa'n't alone quite in that spooky ole bouse; even a young un would be some consolation. She could fuss over 'er a-makin' clo'es an' things; ther' hain't a greater hand t' tog things up than Luviny. I hain't half the nack f'r sech things she has. I've knowed 'er t' fuss a-dressin' dolls since she wus a woman grown.

"Mebby she'd take more pains 'ith her cookin', too, 'eain' she had somebody t' fix things up f'r. I know 'tis eatin' alone; a hody don't bev no gumption t' toggle up fine things, an' then sot down an' eat all b' theirselves," and Miss Luvilly heaved a sigh, as she scraped the biggest share of her breakfast into the swill-barrel for the little Berkshire pigs.

"An' 'twould be a blessin' t' the young un. It's a sin and a shame t' let sech things be in a civilized community. I can't help seein' 'er, poor little, scrawny mite, perched upon that great hard seat, an' a-lookin' s' wishful at my pinks an' Johnnie-jump-ups in the dooryard. She reminded me f'r all the world o' Debby Ann that first night she come, 'a little humped-up heap on the back steps, a-lookin' 's if she hadn't a friend in the world. I couldn't rest nights a-thinkin' o' the young un, even if 'twan't f'r Luviny. Somebody'd ort to, an' it's jest like this, who is ther' that 'ud be likely to if I don't?"

Just as dusk was settling down over the June fields, Miss Luvilly, in stiff black alpaca and her best straw bonnet tied under her sharp little chin, drove out of the bar-yard gate, perched upon the high spring seat of the democrat wagon.

She clucked cheerily to old Nancy as they turned into the road, and slapped the loose rein with impatient fingers.

"Now, be spy, an' we'll be back 'fore Luviny ever knows we're gone. She'll be fidgetin' if the lamps hain't lit when it comes lamp-lightin' time. She'll fret an' stew 'erself into a fever.

"I'll jest fetch 'er right 'long, she won't hev no gettin' ready t' do; an' I'll drive up t' Luviny's an' leave 'er right on the door-steps, jest like we found Debby Ann five years ago. I'll knock, an' when Luviny comes t' the door ther' won't be nobody but that little motherless young un a-standin' there in the dark, an' she'll take 'er in an' pet 'er an' baby 'er up, jest like she done that kitten.

"Mebby I'll git a whole night's sleep if I know ther's somebody t' keep Luviny company," and Miss Luvilly sighed wearily.

And so she went on making her plans the while the little fat mare trotted jogglingly along the dandelion-bordered road, now and then frightening a flock of drowsy sheep up from dusty grass-beds or overtaking a belated cow that had paused by the roadside to leisurely chew her cud and swith the troublesome flies; but just as she turned a sharp curve in the road she came upon a dingy little open buggy, the squeak, squeak of whose narrow, warped wheels sounded strangely familiar to Miss Luvilly's ever-alert ears, and when it came nearer, there, sitting up as stiff and dignified as her portly frame would allow, was Miss Luviny herself, decked out in her new brown sateen frock and her little flat-crowned bonnet with its solitary red artificial posy, while snuggled down in her lap, with her yellow

curls falling all about her tired little tear-stained face was the wee pink-aproned mite, who had recently ridden past perched on the comfortless seat of Poormaster Bush's lumber-wagon.

"Goodness me!" ejaculated Miss Luvilly, letting the lines fall slack over old Nancy's sides, who took the opportunity to stop stock still in the middle of the road.

"Gracious goodness!" joined in Miss Luviny, as she came up alongside. "Where you goin', Luvilly Bascomb, this time o' night?"

"Well, I hain't goin' nowher's, I guess," said Miss Luvilly. "leastways, I hain't goin' no further, seein' you've been on the same goose-chase. I thought you'd go an' git 'er, bein' as you see 'em go past; but I wns 'fraid you hadn't seen 'em, so I come myself. I wanted you should hev 'er. She'll be a lot o' company f'r ye, Luviny."

"F'r me?" and Miss Luviny cleared a curious little lump out of her throat. "I hadn't thought o' takin' 'er myself, Luvilly. I couldn't bear t' let them poorhouse folks hev 'er, an' you're sech a hand t' fuss. I thought mebbly you'd be willin', an' 'twon't be high s' lousesome; you know I've got Debby Ann. Here, little girl, you climb over in t' other wagon, you're goin' t' be Luvilly's little girl, an' live in the big house upon the hill. Come, kiss Aunt Luviny good-by; that's a lady."

"No, she sha'n't," said Miss Luvilly, straightening up, while the muscles about her mouth twitched curiously. "You stay right where you be, child. I sha'n't hev ye. You're goin' down in the holler t' be company f'r Luviny."

"I want uama; I want to go home," wailed the child, burying her face farther into Miss Luviny's brown frock.

"But she'll fix you up nice things t' eat, an' let you pick all her purty posies," said Miss Luviny, reassuringly, while she softly caressed the tangled curls that lay upon her arm.

"No, I won't. I won't fix 'er nothin'," said Miss Luvilly, fiercely. "Luviny Bascomb, you jest turn right round and take that young un home. I can't sleep nights thinkin' o' you down in that ha'nted ole holler. You jest take 'er right 'long, Luviny," she insisted, her voice growing strangely husky.

"Well, I'd as lief be down in the holler as perched upon that ole bare hill all b' myself. It gives me the fidgets t' think of it. I hain't slep' none m'self, an', Luvilly, I want you should take 'er. I fetched 'er on purpose, and she's goin' t' live on the hill, so."

"Well, she kin live on the hill; but somebody else'll take keer of 'er, I won't," said Miss Luvilly, stolidly. "You kin fetch 'er 'long up whenever you git ready, Luviny. Git up, Nancy!" and Miss Luvilly drove out alongside the road and turned the green wagon toward home.

That night little Bessie sat on Miss Luviny's comfortable lap, and ate a supper of bread and milk and red juicy strawberries, while Miss Luvilly brushed out her tangled yellow curls that were longer than ever a Bascomb's was, and took the worn, muddy shoes from the little tired feet, and unbuttoned the faded frock from the slender body. Then she brought a bowl of warm water and soft cloths, and bathed the little form so pitifully frail, while Luviny hunted a tiny white gown from the old cedar chest.

"It'll jest fit 'er," she said, as she brought it down into the sitting-room, "an' ther's all that fine linen that was mother's own hand-doin'. Don't you b'lieve, Luvilly, 'twould make better gowns than sheets. Them dot-muslin curtains, too, jest think what pretty summer dresses we could make out o' 'em, 'ith blue ribbons f'r 'er sash, an' blue ribbons f'r 'er hair?"

"Yes; an', Luviny, that plaid black-an'-white shawl 'ud be 'nough sight purtier f'r little frocks than it would f'r comf'ters; with a spongin' an' a pressin' 'twould be good as new."

"An' the aidgin' an' tattlin', it'll work in real handy, don't you think so, Luvilly?"

"An' the 'arthon platter," said Luviny, as together they tucked their wee charge into the great downy bed. "It'll be a part o' Bessie Bascomb's settin'-out, same's it's been a part o' the Bascombs' five years hand-runnin'."

"I've been thinkin', Luvilly," said Miss Luviny an hour later, as they sat together turning over the pages of the old family Bible, while Debby Ann purred loudly at their feet, and showed her satisfaction by rubbing caressfully against Miss Luvilly's blue apron. "I've been thinkin' that these hain't the only thumb-marks left b' the Bascombs."

"There wa'n't no contrarier man ever breathed than Gran'pa Bascomb, if I do say it; n'r one stubbornner. Gran'ma Bascomb wus sot in 'er ways, an' pa hisself wa'n't overly weak. I guess you an' me, Luvilly, know where ther's some thumb-marks o' Bascombs that wa'n't planted on pages o' scriptur'."

G. A. R., ATTENTION!

The Nickel Plate Road sells tickets to Buffalo August 21st, 22d and 23d. Return limit as late as September 20th.

KLONDYKE IN GOLDEN ALASKA

The Richest Gold-mines in the World—Yukon River Country the Promised Land of Untold Riches—Wages \$10 to \$15 a Day.

ALASKA.

In Alaska, the far northern possession of the United States, the richest gold deposits ever known have been discovered.

Miners have been able to wash out enough gold from the dirt and gravel in a few months to enable them to retire for life and live in ease and comfort. These great discoveries have given America and even Europe the gold fever, and a wild rush is being made to the El Dorado by thousands. The following are some interesting accounts which have been sent back lately by miners and tourists:

DAWSON CITY (Klondyke), June 14, 1897.

DEAR FOLKS AT HOME, Springfield, Ohio, U. S. A.:—Well, we arrived here June the 1st all safe and sound, and have been up in the diggings ever since. Came in last night, so will write you a word, as I go back to-night.

We had a fine trip in here, for it was not cold, and I didn't see much hardship about it; part of the trail was hard, but after we struck the river it was easy enough. The hardships and cold are all newspaper wind; any good, strong man need not be afraid of it. The river was not without danger, but that made it exciting, and it was grand. You come down the river some places like a train, but I would not have missed seeing it for anything. There were four of us in the boat, with but one and one half tons altogether. Some places it is very swift and shallow, with rocks, so one has to be on his guard. I steered most of the way down. We ran the canon, and I also rode the Five Finger rapids. We got through all safe, and did not lose a thing. A great many lost all they had. There were no lives lost this year, so far as I have heard.

Well, it would be impossible for me to attempt to describe the trip or this country to you. I will probably get back to tell you of it some day, but can't write it.

It is very warm here now, just as warm as it ever gets at home; but it gets pretty cold here in winter—from seventy-five to eighty degrees below zero. They don't seem to mind it much, and as a number wintered in tents last winter, I guess I can stand it in a good log cabin.

There are some of the richest mines here in the world. Some count their gold not by ounces but by hundreds of pounds. Some will make a fortune here in a very few months; that is, on two creeks. In some of the claims two men will wash out from eight to ten thousand dollars in one day. Of course, all those rich claims are taken up; but there are hundreds of thousands of miles of river and creeks that a white man has never set foot on. A man can only pack about two weeks' provisions, so he cannot go so very far from the settlements. The mountains are a terror to climb over.

The Grand is covered with moss about a foot deep, and when that thaws the traveling is terrible. Wages are from ten to fifteen dollars a day, but everything is about ten times as high as it is on the outside. The most of the work is done here in the winter-time. The ground is frozen as far down as they have ever gone yet. In the winter they dig holes by putting a fire into them and thawing them out, and they work a hole down in the bed-rock, as that is where all the gold is found. They pile the dirt up on the outside, and in summer-time sluice it out.

Things are high, wild and lively; gold-dust is the currency, and you can get your own price for anything you bring in.

We are prospecting and locating some claims, for if a person gets a good claim, he has all he wants; but it is all a gamble—you may, and you may not.

This may be the last letter you will get from me this year, for there is no regular mail service here now. A carrier goes once a month in the summer, but not in the winter. There are lots of chances for a letter to get lost before it gets out. It costs a dollar to send a letter out unless you can strike some one going out.

Well, I must close, as I am going back to the mines to-night, and I have one more letter to write. We travel at night, or what ought to be night, as it is cooler, and mosquitoes are not so bad. There is no night at all. The sun goes below the horizon a little before midnight, and comes up a little while after. There is no darkness at all, and a fellow loses all track of months, weeks and days—it is just one long day. Farewell.

W. B.

The New York "Tribune" of July 20th says: "Every school-boy remembers that the territory which Mr. Seward bought from Russia and annexed to the United States during the Civil War consists essentially of a big square tract lying between the sixtieth and seventieth parallels of north latitude, with a peninsula and chain of islands reaching away to the southwest, and a still narrower strip of land reaching down southeastward past British Columbia to the fifty-fifth parallel of latitude. Almost without exception the important deposits of gold in Alaska, so far as known, are to be found in this last-named strip or in the adjacent islands. Juneau, on the mainland, and Douglas island, close by, are the most famous centers of production. The gold is found here, however, in veins, not in placers. On Kadiak island, much further to the northwest, but still on the south shore of Alaska, faint indications of gold in veins were found about thirty years ago; but there was not enough to pay for working the ore.

"The first placers to be worked in Alaska, probably, were situated near the head of Cook's inlet, a big bay not many miles from Kadiak island. The richest deposits were along Six-mile creek and Resurrection creek, and yielded from three dollars to ten dollars a day a man for a time. These mines, and the ones further south, with a few of less consequence, have raised the annual output of gold in Alaska from \$15,000 in 1881 to more than \$1,000,000 at the present time.

"Both veins and placers were found in British territory along a small river called the Stickine, which reaches the Pacific by crossing the extreme southeastern tip of Alaska. In the southern part of British Columbia, along the Fraser and Columbia rivers, productive placers have been worked for about forty years. The first great gold craze, over this region occurred in 1858. The Kootenai region, in the extreme southeastern corner of the province, was famous a few years ago. The Cariboo district, lying on the fifty-third parallel of latitude, has proved the most steady and continuous producer. Still further north, along the Peace river (which flows eastward and discharges into Athabasca lake), placers have been worked for several years. Most of the old placers of British Columbia have been worked out, however. There was a period, along in the sixties, when the annual production of that province considerably exceeded \$2,000,000; and in 1864 it rose to \$3,735,850. By 1890 it had dwindled away to less than half a million, owing, it has been asserted, to the exhaustion of the known deposits."

STRIKES IT RICH IN ALASKA.

MIAMI, I. T., July 26.—When the steamer Portland arrived recently to bring the news of the rich gold discoveries in Alaska, her mails contained a letter which has brought joy and renewed hope to the soul of Miss Inola Twowee, a beautiful Indian woman, residing near here in the Cherokee nation.

Some years ago William Sowers was a non-commissioned officer in the regular army stationed at Fort Gibson. Miss Twowee's father was post sutler. She fell in love with Sowers, and they ran away. Soon after Sowers deserted her, and fled the country. Charges of desertion were preferred and a strong effort made to locate Sowers, but he could never be found. The letter in question is from Sowers, and was received by Miss Twowee several days ago. In it Sowers says that he has struck it rich on the Klondyke and intends to return to America in the spring and reclaim Miss Twowee as his wife. He has been seven years in Alaska.

MEN WORTH \$10,000.

CLINTON, Mo., July 26.—Steve A. James has just received a letter from an old Pacific slope, mining companion, J. C. McLain, dated Dawson City, Alaska, May 20th. He says:

"I never heard of such a country as this. The papers may blow it up, but they cannot tell half. You meet more men here worth from \$10,000 to \$250,000 than you do men worth \$25 in the states. If you get this letter, come at once. The world will marvel at the richness of this region. The Klondyke is rich, Dawson is richer. This place will run wild by next year."

DESERTING PAYING MINES.

SAN FRANCISCO, CAL., July 23.—Among the arrivals from Alaska on the steamer Bertha was Dr. C. F. Dickenson, of Kadyak island, which lies just at the head of Cook's inlet. He says the gold excitement all over the territory of Alaska is something unprecedented, and that people are flocking to the Klondyke in a way that threatens to depopulate many of the trading posts and coast towns.

"When I left Kadyak, two weeks ago," said Dr. Dickenson, "the people were leaving all that section of country and flocking in the direction of the Klondyke. In a way the situation is appalling, for many of the industries are left practically without the means of operation. Mines that are paying handsomely at Cook's inlet have been deserted.

"In my opinion there are just as good placer diggings to be found at Cook's inlet as in the Klondyke region. There is not a foot of ground in all that country that does not contain gold in more or less appreciable quantities. The great trouble has been that people have not had either the courage or opportunity, I do not know which, to thoroughly prospect the country. I think that in another month the country about Cook's inlet will be practically deserted. There is room for thousands of men, and there is certainly no better place in the world for a poor man."

THOUSAND DOLLARS TO THE PAN.

SEATTLE, WASH., July 21.—B. W. Shaw, formerly a well-known insurance man of this city, has written a letter to a business man of this city in which he states frankly he does not expect to be believed.

"This is a great mining strike," says Shaw, "probably the greatest on the American continent or in the world. Gold has not been found in great paying quantities except on two creeks, about two hundred claims.

"Some of the pay-streaks are nearly all gold. One thousand dollars to the pan is not an uncommon thing, and as high as one hundred ounces have been taken out in a single pan. It is not unusual to see men coming in with all the gold-dust they can carry.

"You would not believe me when I tell you that I went into one cabin and counted five five-gallon oil-cans full of gold-dust, but it is a fact. It is the result of the work of two men during the winter, and the dump is not much more than half worked out.

"There has been about \$2,000,000 in dust taken out so far in the district. At a low estimate, I believe there will be \$50,000,000 taken out during the next year."

COLUMBUS BUGGY COMPANY RESUMES OPERATIONS.

THREE HUNDRED MEN TAKE UP THEIR DAILY WORK, WITH MANY MORE TO FOLLOW.

Joy and gladness, hope and prosperity were mingled in the tones of the great whistle on the immense factories of the Columbus Buggy Company, Columbus, Ohio, as it sounded on July 18th a recall to work for the hundreds of employees who have been in enforced idleness. This great whistle has been silent for so long that when it was blown that morning it was the fond wish of all who heard it that before many weeks the great factories may again be working to the fullest capacity.

With the resumption of work Mr. Clinton D. Firestone, the only surviving partner of the great concern, started in to place the Columbus Buggy Company on the high pinnacle it held before the late combination of circumstances which resulted in the assignment. It is a significant fact that Mr. Firestone is at the head of the great concern, and it was he who contributed not a little to the crowning success of the company in its palmy days.

Three hundred men went to work, and as soon as the stock can be put in shape others will be added, it being the intention of Mr. Firestone to put back all of the old force of one thousand men as soon as such a move is practicable.

Owing to the fact that practically the old force of skilled employees is now at work at the benches and forges, the high grade of vehicles for which this company was famous in past years will be thoroughly maintained. Considerable partly finished stock will be worked up at first, but at the same time much new material will be started through, so that there will be no cessation in the onward progress.

The company have some traveling men on the road, and others will be put on in a very short time. Many of the customers were found waiting for the resumption of work by this concern, since the name of the company was the synonym for good, honest, reliable work. Thus it is that many sales have been made already, although the lifting of the assignment has just been completed. Truly, the re-opening of the Columbus Buggy Company is one of the indications of a revival of business.

EVENINGS AT HOME.

What to do in the long evenings that are coming is the question just now agitating the home, and it is a pertinent one, taken in connection with the fact that the old Norman law of ringing the curfew is actually revived as a means of discipline in America. The children are to be rung off the streets, to which they are consigned by too indulgent or too careless parents, and brought into the family jurisdiction. They need amusement to keep them off the streets, but so do the parents, who only eat, sleep or work in the home. If you wonder at the fascination of the streets after dark, look into the rows and rows of unlighted homes, where there is not a ripple of amusement from June to January. In that semi-twilight of false economy the children are tolerated until bedtime, when they are hustled off in a spirit of thankfulness on the part of their elders, that at last they—the elders—can have some peace. And the good-night thought of Willie or Sammy is of the good time they might have been having with "Jimmy the Lark" in the alley. Life is formal and dull to the more respectable child, because he is debarred the pleasure of Bohemia, and the charm of Bohemia is its spirit of amusement.

"Laugh, and the world laughs with you."

A book has been published which gives a program of twenty-five evenings of fun and instruction, the latter being of the kind that produces amusement, and is not tiresome. It deals with all ages, and has a scope which includes every member of the family—one being known as "invalid's evening," when a spirit of unselfishness is fostered by all contributing to the pleasures of one. Then there are "mother's evenings," "father's evening" and a "go-as-you-please evening," when the fun is general and rules are suspended. Also an "educational evening," including historical games or such amusing exercises as that old one known as "bounty-rhymes," to which Horace Walpole contributed a characteristic verse:

THE GENTLE SHEPHERD.

I sit with my toes in a —
And if any one asks me for —
I hits him a rap with my —
And 'tis sentiment kills them, not I.

Much hilarious fun ensues before the rhymers furnish the final rhymes. "brook," "why," "crook," and the evening can be passed in this way, during which time a new idea of rhymes and rhyming may be gained.

Myths, fables and legends form a program for a whole evening which passes all too quickly. The subtle distinction between the words offers a subject for debate, which is well illustrated by a story.

In western Arkansas there is a village called Scullyville. A stranger asked for a definition of the name, and why such a one had been bestowed on the place. He was informed by an ignorant stage-driver that the name was derived from the number of skulls that had been found there by early settlers, while the truth was that the word Scullyville was an Indian name for "money town." The only mythical thing about it originated in the mind of the driver. People with an appetite for recreation will find much amusement and instruction in "hunting the myth."

SPONGING WITH HOT WATER FOR A HEADACHE.

In case of the ordinary nervous headache from which women suffer so much, remove the dress-waist, knot the hair high up on the head, out of the way, and while leaning over a basin, place a sponge soaked in hot water, as hot as can be borne, on the back of the neck. Repeat this many times, also applying the sponge behind the ears, and if the assertion of the writer is not a mistaken one, in many cases the strained muscles and nerves that have caused so much misery will be felt to relax and soothe themselves out deliciously, and very frequently the pain promptly vanishes in consequence.

Every woman knows the aching face and neck generally brought home from a hard day's shopping, and from a long round of calls and afternoon teas. She regards with intense dissatisfaction the heavy lines drawn around her eyes and mouth by the long strain on the facial muscles, and when she must carry that worn countenance to some dinner party or evening's amusement, it robs her of all the pleasure to be had in it. Cosmetics are not the cure, or bromides or the many nerve sedatives to be had at the drug shops. Here again the sponge and hot water are advised by the writer quoted, bathing the face in water as hot as it can possibly be borne. Apply the sponge over and over again to the temples, throat and behind the ears, where most of the nerves and muscles of the head center, and then bathe the face in water running cold from the faucet. Color and smoothness of outline return to the face, an astonishing freshness and comfort results, and if followed by a nap of ten minutes all traces of fatigue vanish.

\$300.00 Given Away.

OUR NEW AND IMPROVED WORD-SPELLING CONTEST.

We request that you carefully read all details below given of our new and improved word-spelling contest. The word now announced is **Geographical**. It contains twelve letters. Our offer is to give **\$300 in cash prizes**, and an extra prize of a very choice book to persons who make smaller lists of words from "Geographical." This is the manner of compiling them: Heal, peal, leap, ape, grape, par, harp, clog, and so on; use these seven words and as many more as you can think of, but you cannot use a letter twice in the same word except G or A, and we will permit you to use these letters twice because they are repeated in "Geographical." After studying out all the words you can, write them neatly on paper, putting them alphabetically. For example, place all words that begin with A together, and so on, in order to facilitate the examining by our committee. No names of persons (such as Ralph), or names of places (such as Georgia), or other proper nouns, will be admissible, neither will we count abbreviations, prefixes, suffixes, obsolescents or foreign words. No words will be allowed unless they are printed in the dictionary section of "Woman's World Dictionary and Reliable Guide." We therefore advise you to send for this new book at once, so that you can compile your list of words successfully. In previous contests the prizes have been awarded to persons having access to all the dictionaries, encyclopedias, directories and books of reference in large cities and colleges. **In this contest**, as the "Woman's World Dictionary and Reliable Guide" will be the guide and basis of comparison for all lists, this contest will give **every one an equal chance**, whether living in country or city. It makes the contest a simple one.

Prizes to be Paid.

For the most complete list of words sent us in accordance with our rules, we will pay **\$100 in gold**. For the second largest list we will pay **\$50 in gold**. For the next five largest lists we will pay each **\$10 in gold**. Next twenty largest lists, **\$5 each**. For every list sent us we will give a new edition of the famous and popular story entitled "**The Scarlet Letter**," by Nathaniel Hawthorne, one of the most celebrated and fascinating books in American literature, neatly printed in good clear type, prettily bound and unabridged. This book, in cloth-bound form, has been sold at \$1.25, but you get the full story free, postpaid, when we receive your list. We shall also award other high prizes; each same and of equal high valuation to contestants who use our Dictionary, the only condition being that the recipient of a gift shall become a regular subscriber to **Woman's World and Jenness Miller Monthly**.

Contest Ends Oct. 19, 1897.

This "Geographical" word-spelling contest will be closed Oct. 19, and your list must positively reach us not later than that date. This affords you ample opportunity to send now and secure the "**Woman's World Dictionary and Reliable Guide**," and compile your list of words according thereto. We agree that every person who buys our Dictionary and compiles a list carefully shall receive a prize of good value in addition to the opportunity of earning one of the valuable cash prizes on conditions in above paragraph.

Read Every Word of This.

All lists of words entered in this contest will be examined according to the words in the Dictionary Department of our new

"WOMAN'S WORLD DICTIONARY AND RELIABLE GUIDE."

A mint of information. This volume excels, in completeness and compactness of value, any book of the kind ever published. It includes over **50,000 words**, which are fully pronounced; it is a dictionary compiled up to this month; all new words added. It includes a **Statistical Gazetteer of the World**, giving important information about every country on the globe, with populations, names of rulers, cities, areas, etc. It shows you the values of foreign money, old coins, etc. It gives rules for spelling, also abbreviations that every one should learn. This compilation contains the essential rules of etiquette in six books teaching all the rules of good society in public, in the parlor, dining-room, when courting, calling, etc. Golden Rule helps. All about punctuation. **Guide** for making notes, receipts, due bills, etc., legally. How to write letters on business, love or social matters. **Definitions** of foreign phrases. **Parliamentary** rules; how to conduct a meeting; speeches on many subjects; what to say at weddings, presentations, school ceremonies, etc. A **Perpetual Calendar**, that enables you to tell any day of the week in the last 200 years or for the next 500 years to come. The "Woman's World Dictionary and Reliable Guide" is handsomely bound in cloth, lettered in gold, printed in clear type on extra quality paper, and is in every respect a most important and valuable reference library. We will send it by mail, postpaid, upon receipt of 25 cents in silver or stamps. Address WOMAN'S WORLD PUB. CO., 22-24 North William street, New York City.

Closing Information.

After you have carefully compiled your list of words, send it to us, with **25 cents** to pay for three months' subscription to our charming, handsomely-printed, profusely-illustrated magazine, **Woman's World and Jenness Miller Monthly**. As soon as your list and subscription reach us, the prize of the story, "**The Scarlet Letter**," in book form, will be mailed to you. When the committee finally examines the lists, directly after **Oct. 19**, the \$300 in cash prizes will be forwarded to contestants, and, as above guaranteed, we will also give prizes of high value to all contestants who have used our **Dictionary**, in addition to the opportunity to gain valuable cash prizes for largest lists. To avoid any mistakes, we shall send a coupon in each Dictionary, which, when returned, attached to your list, will insure a prize, to be given in accordance with the excellence of your list.

In conclusion, we assure you that we are perfectly trustworthy. We have paid over **\$10,000 in prizes** of cash, etc., within a year. We refer to any mercantile agency as to our reliability. If you have a friend in New York, ask him or her to call and investigate. We wish to also state, for your assurance, that we always refund money to any dissatisfied person. Address:

WOMAN'S WORLD PUB. CO.,

22-24 North William St., Dept. 107, New York City.

N. B.—We occupy an entire floor in the German Herold Building, at above address. Our establishment is in the busiest part of N. Y. City, near the entrance of the great Brooklyn Bridge.

Our Household.

MY OWN.

BY ELLA HOUGHTON.

I love him, for he's always kind;
I love him for his noble mind.

His voice ne'er gives a tone of fret,
Discouraged wail, nor e'en regret.

Each day he makes the best of life,
Seeks happiness, but never strife.

A happy heart, the dower given
To him I love—a gift from heaven.

Methinks the cloud with silver lining
Through his dear heart is ever shining;

For he finds joy the livelong day;
God knows it is a happy way.

What wonder then that I, his wife,
For his love breathe thanks each day of life?

No matter that the dark days come,
He finds a hope and brings it home—

Instead of sorrow evermore,
To one who waits within the door

For the loving clasp of that strong arm
That ever shields her safe from harm.

His smile is sunshine, love and gold,
Such love as never does grow old.

His thorough worth none e'er denies,
God bless my love! I won the prize.

HOME TOPICS.

BLACKBERRY PUDDING.—Many people who like the flavor of blackberries cannot eat them on account of the seeds. Stew a quart of blackberries, using a teacupful of water. Sift the berries or put them through a fruit-press to remove the seeds; put the juice back into the saucepan, with a scant teacupful of sugar. Let this come to a boil, and then add five tablespoonfuls of corn-starch stirred smooth with a little cold water. As soon as it thickens, pour into molds, and serve cold with cream and sugar. Raspberries or grapes may be used in the same way. Another good pudding may be made by preparing the fruit-juice and pulp as above, and pouring it over split and buttered Graham biscuit or slices of either white or Graham bread buttered and laid in a pudding-dish. Serve cold either with or without cream. Sometimes I make a meringue for the top of this pudding, using the whites of eggs when I want the yolks for salad dressing. By the way, the yolks of eggs can be kept fresh for a day or two, if you are not ready to use them at once, by putting them, unbroken, into a bowl, and covering them with cold water. Set the bowl in a cool place.

HOT-WEATHER HINTS.—It seems to me August is the most trying month of all the year. The weather may not be hotter, but we are tired out with the heat that has gone before—the heat and work—for to the housekeeper summer brings much added work in the way of canning, jelly-making, pickling and preserving. Now, in August so many things must be looked after to keep them from spoiling. Mold and mildew are on a constant watch to outwit the housekeeper. Meat that will keep a week in cool, dry weather will hardly remain fresh twenty-four hours without ice, which is not always at hand.

If you wish to save the trimmings of a roast for soup, and do not want to use

The bread-box must be carefully washed and dried before each new baking is put away. If there are any pieces of bread left over, dry them thoroughly in the oven, and then they may be kept for puddings, crumbs for breading, etc.

Buy cheese in small quantities, and wrap in a cloth wrung from strong salt-water; then look to it every day.

Flour, meal, Graham-flour and all cereals must be kept in a dry, cool place, and covered tightly to keep out insects.

Be very careful not to have any clothing left damp, or it will mildew. Soiled clothes damp with perspiration should be dried before they are put into the bag or basket. Do not leave old shoes lying in the closet. If they are past wearing, throw them away at once; burying them in the garden is a good way to get rid of them. I know all these things are troublesome work, but there is no other way to be sure nothing is wasted, nothing but healthful food put on our tables, and no mold or decay poisoning the air of our homes. It is a task we must attend to ourselves or we cannot be sure it will not be neglected.

MAIDA MCL.

SUMMER NOVELTIES.

CORN-NAPKIN.—This requires one half yard of linen before it is fringed. Draw threads all around, then hemstitch, and fringe when complete. For the design work the ear of corn in solid Kensington stitch. For the benefit of new workers I will explain that this stitch is a long stitch worked from yon. With some patterns the stitches can be part long and part short, especially when working large flowers or large leaves. The lettering can be done in chain-stitch or outline.



Lay the napkin upon the platter, the corn upon it, then fold the end over, and the corn keeps hot without becoming soggy, besides being a very beautiful table decoration.

WICKER TABLE-COVER.—Poppies are this season considered the very "smartest" table-flower. A cover worked in a design of poppies in a variety of designs

ored with indelible colors, the edges being outlined with heavy silks in harmonious colors. The edge is finished with a rick-rack braid stitched on with green silk-thread with the sewing-machine.

A MINT-STICK.—This is a dainty sachet for your handkerchief-box. Make a roll of stiff paper to simulate the size of a stick of peppermint candy, stick together with tube-paste. Put into it your favorite sachet-powder, and a little cotton in the ends to keep it in. Cover with white satin ribbon put on as you would roll a paper-lighter, then cover the joining with red satin baby ribbon, put on as the candy is striped. A candy-jar filled with them in a case of fancy work deceived a good many of us for a few moments.

BELLE KING.

TO REPLENISH THE PURSE.

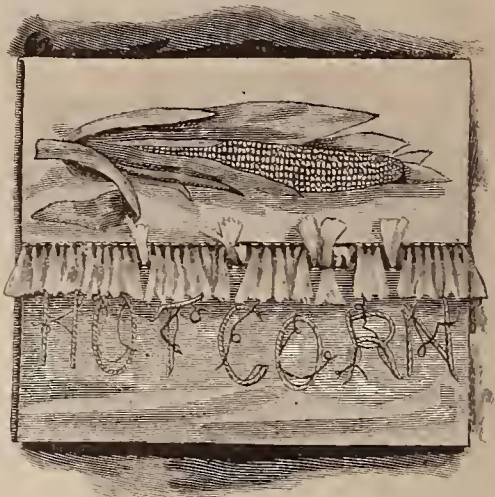
Available methods for replenishing empty pocket-books are eagerly looked for by farm wives and daughters, and the subject is one of solicited inquiry and study. Yet the means and opportunities at hand are the ones most often overlooked, and it is the unattainable that is wished for and reached for without avail.

When appealed to, as we often are, for suggestions upon this line of undertakings, we have wondered at the little attention given by our sister friends to the possibilities within their grasp and keeping. But, strange to say, the practical suggestion of beekeeping is looked upon with little favor, and only from the very fact that so little thought has been given to the subject as to render the remunerative side of it as obscure.

Honey is one of the inexpensive luxuries of which the demand is almost invariably in excess of the supply. It is an article of

she does not like bees, and they do not like her. She has all she can do besides, and then I love the work so well myself that I prefer to take the entire care of them. She helps me to take care of the profits."

But if by a few hours of two afternoons of each week he could look after thirty colonies of bees and sell from them over three hundred dollars' worth of extracted honey, besides having an unlimited family supply, I see no reason why a woman



could not do nearly or quite as well if inclined to exert herself in this direction. We know of women who are succeeding in this line of employment, and making much more than three hundred dollars a year from it. They are scattered all through the land. They have equipped themselves for the business, make a study of the subject, take and carefully read a number of bee journals, make exhibits at the fairs, and they are making name and money.

A colony of bees may often be bought for five dollars. The usual price, we are told, is from eight to ten dollars a colony, but we have known them often offered and sold at five dollars a hive where the owner has plenty and wishes to dispose of some of them.

The first honey is gathered from apple and plum blooms of April. With the coming of August white clover and a common weed everywhere known as heart's-ease come into bloom. White-clover honey has a reputation that is world-wide, and that extracted from heart's-ease is of a most pleasant and agreeable flavor. Alfalfa honey is said to be of extra quality, and as alfalfa has become one of the most popular and common field crops of the great West, there is small excuse for the would-be wage-earner who would like to attempt beekeeping if— For there are now no serious ifs in the way.

Our papers are all too often filled with the unpractical mentionings of "ways for women to make money." Life and living is a serious thing and no child's play about it. Work to do that will be remunerative is what all are seeking for who are ambitious, willing and yet unemployed. We are not so much seeking work that is "easy" as work that is profitable. There is no walk in life that entails actual labor that is entirely easy or altogether pleasant. But we may make it a pleasure to a great extent, no matter what the task the hand finds to do if heart and soul be interested therein, and if there be a determination to succeed, to be independent and to be hopeful and helpful.

Take upon yourselves the care of a plot of well-fruited ground, add a few, or even



one or two, colonies of bees thereto, give all the care and thought of which they are worthy, and surprising will be the results in income in an almost incredibly short space of time. Both branches of culture grow so rapidly into money. From a single colony of bees one soon has hives well populated and all one can attend to. There may be honey to dispose of almost the year round. And fresh berries and small fruits of all kinds are never found begging for a market.

ELLA HOUGHTON.

TRIAL FREE.

If you have rheumatism, try that simple remedy which cured me. Trial package and other information free. Address John A. Smith, Dept. H, Milwaukee, Wis.



the soup at once, put all the bones and trimmings into a pan, and bake in the oven an hour or so; then they will keep a day or two, and be really improved for soup by the baking. Meat that has been previously cooked—pieces of roast, steak, etc.—are just as good for meat-pies and pot-pies. Slices of cold, rare roast beef are nice broiled for breakfast.

and colors carries out the entire effect of the artistic arrangement of the natural flowers.

Select a heavy linen, make it fit your table, then put around the edge a two-inch hem, and finish it with double hem-stitching.

CHINESE TABLE-COVER.—These come stamped upon satin sheeting, and are col-

diet that grows greater in favor in almost all families as it is more and more used. The taste increases rather than diminishes for this richest and most healthful of sweets. And this taste and demand may become to hundreds of farm wives and their daughters their very means of gaining an income of no small proportions.

East or West there are few farms so desolated that beekeeping may not be made upon them a source of revenue, to some small extent at least.

It is given me upon good authority that one stand of bees should make one hundred pounds of honey besides the amount needed for the hive supply for the purpose of carrying the inmates through the winter in excellent shape. At the very lowest price ever obtained for the product there is a direct revenue of ten dollars a hive at ten cents a pound. But it more often brings fifteen and eighteen cents a pound, and it is frequently the case that quite a number of pounds more than the designated one of one hundred may be obtained in a single season from a strong swarm of healthy bees located in a community of honey-producing plants.

The one from whom we bring you these points of information tells me that last season he hired a hand to attend the corn-field that he might have more leisure for this easier method of money-making. He loves to work with the bees, and assures me that with his thirty colonies he spent but little time. Asked if his wife could not have attended them as successfully as himself, and thus have had at hand a remunerative employment for spare hours, he replied: "Any woman who will be fearless of them can do as well as I. My wife could have handled them, but

FRUIT DESSERTS—PEACHES.

1. Peaches and Cream.
2. Peach Gelatin.
3. Fruited Gelatin.
4. Peach Shortcake.
5. Peach Pie.
6. Peach Cottage Pudding.
7. Peach Pudding.
8. Frozen Peaches.
9. Peach Dumplings.

PEACHES AND CREAM are looked upon as a sort of ideal dish, and in truth they are certainly very delicious. Care should be taken to use only fine, ripe, juicy peaches. So many peaches on the market are sold before they are fully ripe, and in consequence thereof are hard and less palatable. Pare your peaches thinly, remove the stones, and quarter them, or if they are very large, divide them into eighths; place them in the dish in which you intend to serve them, and set aside in a cool place. Do not forget to cover the dish, as it will prevent more or less discoloration of the fruit. This dish should be prepared about an hour before serving, and should be placed in a refrigerator or other cool place. The sugar (powdered) and cream should be passed individually at the table. The cream can be used either plain or whipped, the latter being better liked, as a rule, when it is whipped to a thick snow, sweetened with powdered or confectionery sugar and flavored with vanilla extract to taste.

Ice-cream is also a very delicious elaboration of the dessert peaches and cream. Some people in preparing this dish cut up the peaches several hours before serving, placing first a layer of peaches and then one of powdered sugar in the dessert-dish, allowing the same to stand in refrigerator or other cool place. This dessert, while very pleasant, is perhaps not as pretty as the above, because the peaches are apt to discolor to some little extent, and also to soften through the aid of the sugar; still it may prove an agreeable variation occasionally.

PEACH GELATIN.—Take one half dozen ripe peaches, pare and quarter them, and sprinkle with a little sugar. Soak a package of gelatin in one pint of cold water for one half hour, add one and one half pints of hot water, and stir until the gelatin is dissolved; then sweeten to taste with sugar, and add a few drops of almond flavor, after which add the peaches. Set away in a refrigerator or other cool place to harden. This dessert is better if made the day before, as it requires some little time to set, especially in the warm weather. Serve plain or with sugar and cream.

FRUITED GELATIN.—This is a very elaborate dish, and one which might be made on special occasions when something more than the ordinary is desired. Peel and divide into sections three large oranges, not failing to remove all the seeds. (Navel oranges are to be preferred, because they are seedless, and are exceedingly sweet and juicy.) Peel and

preparing it properly, into your dish, and pour over the whole the prepared gelatin mixture. Set on ice to harden. When ready to serve, garnish the top with the whites of six eggs beaten to a snow. The yolks can be used in the sauce, which is made as follows: Beat the yolks of the six eggs, with a cupful of sugar and two teaspoonfuls of corn-starch; scald one quart of milk, turn it into the above mixture, strain, and heat until it thickens, stirring all the time; add a little vanilla extract and a pinch of salt, and let it cool before serving. This, as you will see, is a very fancy dish, but at the same time a very delicious one without being rich enough to disturb one's digestion. Very frequently the gelatin with fruit alone is served without the beaten snow and sauce, and it is a question which is preferable.

PEACH SHORTCAKE.—Carefully pare and cut into thin slices three pints of fine, ripe peaches. Put the fruit into a large dish, and sprinkle it with a cupful of powdered sugar, and let it stand in a refrigerator or other cool place for some little time—while you are preparing the dough for the shortcake. Sift through a sieve one quart of flour, one teaspoonful of soda, two of cream of tartar (or the equivalent—baking-powder), one of salt and one of sugar. Now rub four tablespoonfuls of butter or lard into the mixture, and add one and one half cupfuls of milk; mix quickly until smooth and firm. Divide this into three parts, and roll each out to about the size of a tin pie-plate. Bake in a hot oven for ten minutes. When the cakes are done, split each into halves quickly with a sharp knife; place the lower portion of each on a dish, and spread with butter, adding a layer of peaches. Place on the top piece of crust, spreading same with a little butter; add a layer of peaches, and cover with whipped cream. (Cream whipped to a stiff froth, sweetened and flavored, is to be preferred.) This shortcake is liked by many served hot, although it would also be very palatable if served cold, omitting the whipped cream until passed at the table, when the whipped cream should be served individually, or else the shortcake served in deep dessert-plates with iced milk.

PEACH PIE.—Carefully pare and stone your peaches. Line your pie-plates with paste, and place your peaches in same; add to each pie about a cupful of gran-

ulated sugar; cover your pie with the second crust, not neglecting to make the usual slashes and fork-prickings in same. This pie is very nice when served with whipped cream, and even more so with vanilla ice-cream.

PEACH PUDDING, as now given, is a va-

other mixture. After beating up well add your sliced peaches, and bake in a loaf. Be sure to grease the pan. Serve with hard sauce, which is made as follows: Cream well together one half cupful of butter and one cupful of fine sugar; place on a plate, and grate over it a little nutmeg. This should be kept in a cool place until the pudding is served.

with whipped cream or ice-cream. While whipped cream may be served with almost any peach dessert, it is not necessary, nor is it desired by every one, some having a decided aversion to milk or cream in any form.

Most of the above-collected recipes may be served without the cream—either plain or with hard sauce.

EMMA LOUISE HAUCK.

PIECES OF BREAD.

With good bread there should be never a waste. Having poor bread, it is all waste from beginning to end. Inferior, cheap grades of flour invariably give inferior bread returns, and it is money wasted, health impaired and an always disappointed, disheartened cook. Beautiful bread makes beautiful toast. And a delicately served plate of dry toast or a dish of milk or buttered toast is appetizing and acceptable at almost any time. The half and quarter slices of bread that are frequently left upon the plate, and then become somewhat dry, if toasted to a crisp, light brown condition in a hot oven, make a delightful breakfast article of diet if dipped quickly, bit by bit, into hot coffee that is properly made and seasoned with cream and sugar, and then buttered with delicate, sweet butter, such as the farm affords. The oven must be hot, and the toast carefully watched, and the slices often turned.

Dry pieces of bread dipped into beaten eggs and fried brown in sweet butter is always an acceptable form of presenting "pieces" to the family at table. Buttered alone it is nice. Jellies or maple syrup add to its palatable qualities.

Fresh slices of toast dipped quickly into and out of hot water, seasoned with salt, pepper, butter and a few spoonfuls of thick sweet cream, is very nice to be eaten with poached eggs. To poach the eggs, drop them from the broken shell into salted boiling water, cook to the condition preferred by individual members of the family, take out upon a hot plate with a milk-skimmer; season with butter, pepper and salt.

NEDELLA.

A SCHOOL-DRESS.

The last two weeks of August should be taken to put in repair or make new a suitable wool dress for early fall wear at school. Too many parents leave this preparation too late, and frequently severe colds are taken by not being clad in proper clothing for the rainy and often cool days of September. This jacket-and-skirt suit is serviceable, as it will answer for cool or warm days. The shirt-waist under the jacket does for the house, while the jacket serves for outdoors.

If this is made in mohair and trimmed with braids, it makes a very attractive suit. Or a light-weight cloth material will last the entire season. See to it also that rubbers, mackintosh and umbrellas are where they can readily be found at this season.

Many are now agitating the subject of having only white shirt-waists, either of linen or batiste, as they launder well until worn out, which cannot be said of the fleeting-colored novelties. A dark straw sailor or a tam-o'-shanter goes well with this suit.

L. L. C.

POINT-LACE, WITH TATTING.

Mark the pattern upon white paper-cambrie with ink, and let it dry. Then baste the braid upon it, finish all the lace-stitches first, then make the tating shapes, and attach them with lace-stitches. Use the best make of white spool-cotton for the tating. No. 40 being a good number for the coarse braid, and No. 60 for a finer quality.

L. L. C.

VINEGAR PIE.

To two eggs slightly beaten add half a cupful of sugar and one rounded tablespoonful of flour; beat these until very light, then add a half pint of cold water, four tablespoonfuls of vinegar, flavor to taste with nutmeg. Bake like custard pie.

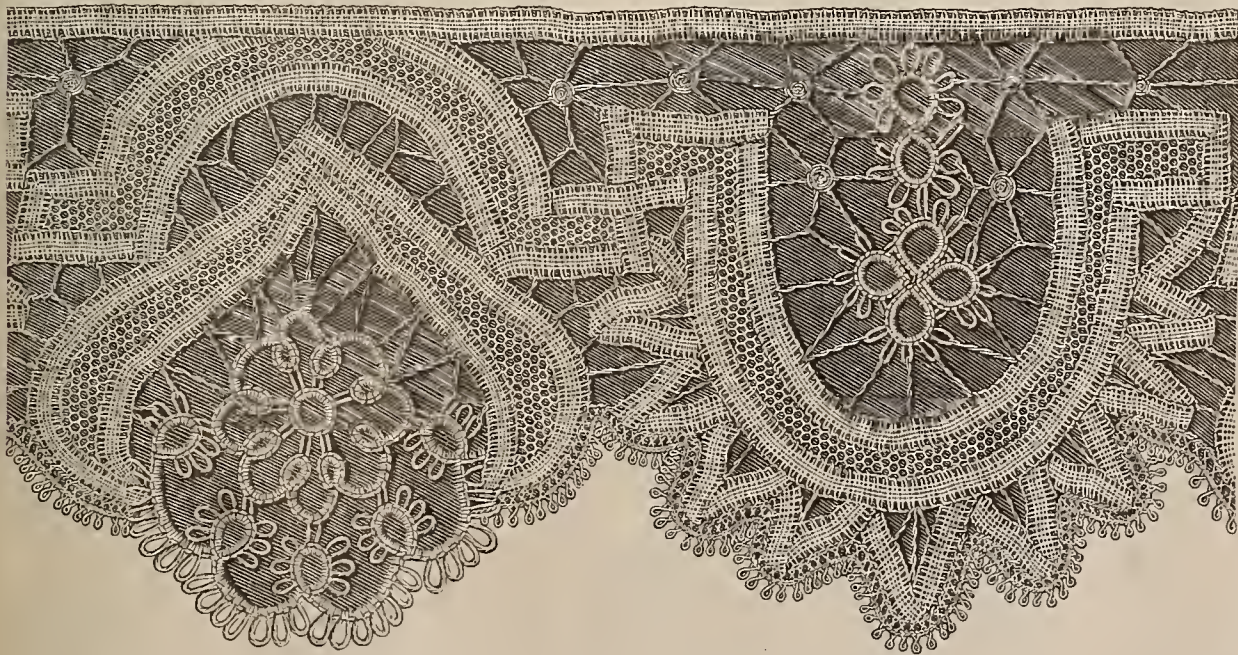
MRS. ROBERT J.

My wife had an attack of Lung trouble. She coughed incessantly and raised enormously. Jayne's Expectant, by the blessing of God, restored her.—(Rev.) J. H. HOPKINS, West Berlin, N. J., Feb. 18, 1894.

Aid digestion with Jayne's Painless Sanative Pills.

A \$100 BICYCLE FREE.

Some one will get a \$100 bicycle absolutely free, and that one will be the winner in the August prize contest. See page 19 for full particulars.



slice crossways three large bananas. The meats of twelve English walnuts, a few ripe strawberries and three large peaches, pared and quartered, are also to be used. Soak a package of gelatin in one half pint of water for half an hour, adding one and one half pints of hot water, and stir until the gelatin is dissolved; sweeten to taste, and flavor with a little orange extract. (The grated rinds of the oranges can be used instead of the flavoring, in which case the gelatin should be strained.) Place all the above-mentioned fruit, after

ulated sugar; cover your pie with the second crust, not neglecting to make the usual slashes and fork-prickings in same. This pie is very nice when served with whipped cream, and even more so with vanilla ice-cream.

PEACH COTTAGE PUDDING.—Make a batter consisting of three tablespoonfuls of melted butter, one well-beaten egg, one cupful of milk, one pint of flour and one and one half teaspoonfuls of baking-powder. The flour and baking-powder should be sifted together through a sieve into the

ing them well covered; then mash them fine, and add one quart of cold water. Freeze the same as ice-cream. This is perhaps not practicable for all, many of whom may not be in the habit of freezing cream, but it may be available for at least a few.

PEACH DUMPLINGS.—It is hardly necessary for me to give the recipe for this dessert, as I have hitherto in a former issue given the recipe for blackberry dumplings, which will do for this dessert. Peach dumplings are very delicious when served

Our Household.

LIFE MYSTERY.

There are songs enough of the home life,
Of parents and children sweet,
I sing of the many who stand alone,
And whose lives are incomplete;
Who in some way have missed the choicest
Of blessings they most would prize,
And look upon happiness only
Through other more fortunate eyes:

Who bravely carry the burden
Of a heavy daily cross,
Whose tranquil, smiling faces
Give no hint of pain or loss;
Yet whose hearts are filled with yearning
Beyond their strength to deny,
For the things that are sweetest and dearest
Which alone can satisfy.

Oh, sad are the ones who possessed them,
And have watched them fade from sight,
With the lingering look from loving eyes
That had filled their lives with light;
But sadder are those who, softly,
In their inmost souls must say:
"Not you!" to one another,
They meet in their narrow way:

Yet who feel that the sun is shining
E'en now on the thoughtful brow
Of the man or woman in all the world
Before whom their hearts would bow;
Who in turn are wistfully waiting,
With eager outstretched hands,
To welcome the long-delayed one
Who would answer their soul's demands.

Oh, for those who miss each other
Through all life's long sad years,
Unloved, uncared for, and lonely,
My eyes o'erflow with tears,
But I think the loving Father
Will some time make it clear,
And heaven's sweetest joys be given
To those who missed them here.
—Minnie May Curtis, in Chicago Inter Ocean.

HAMMOCK COMFORT.

SUCH a comfort is a great roomy hammock that I am wishing every housewife in the land might own one, and to her who does not own one I would say, let it be your next "extravagance" you commit, nor do you count it an extravagance either.

Having made the purchase, enjoy it then to the best possible extent, for if of the average class of housewives your life is always overfull of work if you have allowed it to be so, and every moment of rest you take—stretched in this cool, comfortable nest—just so much is the clear gain to you in strength and health. To lie down rests so much more than to sit down, and in a half-reclining position in the hammock, bolstered with pillows or cushions, one can rest and read at the same time, if not too tired to do anything but lie still and shut one's eyes before these few moments of rest-time came. If too tired to read, just swing, and keep out of your mind the thought that you ought to be doing something. You are doing something, and employing your time in a way that it could not be better given to. There are, of course, countless things that you could be doing, but that are not half worth the doing. And the saving of nerve force is.

To me there is not in the house so cozy and restful a spot as that in which my hammock swings. It is not where hammocks usually are—out under the trees where myriads of bugs, flies and mosquitoes are swarming, and where, because of them, one cannot take a moment's comfort or peace. But it swings in the coolest and prettiest place in the house, and is suggestiveness itself for rest and enjoyment, and it proves no less a joy than it appears.

Strong hooks are firmly embedded in the studdings by screw-eyes upon opposite sides of the walls, or rather, somewhat across a corner, and it is there the hammock is swung. Its only furnishings are pillows and cushions, one of which bears a historical value, and is much beloved. They are often all piled on the floor, however, while the cooler effect of unfurnished hammock comfort is enjoyed. It is swung high from the floor just before double doors and in close proximity to open windows, within easy reach of the library and a table full of papers and magazines. And this is where I take many a "kittie-nap" between working hours, gathering strength and endurance anew to meet the duties that fall to the life of every housekeeper. And when the mail comes, what a blessed comfort hour I do take in this self-same place. There is always a budget of letters and papers to look through, and

I lie and rest while I read the business letters, dictate to myself, and plan out their replies. And then comes the happiest part of all, for among the many letters that each incoming mail is sure to bring there are sure to be letters from home folks, schoolmates of "ye olden times," and sister friends who are strangers, and yet strangers they are not. And right here let me whisper to you that at my home we have daily rural delivery of mail. Think for a moment what it must be. Deprived of it now we would miss it sorely. It is one of the bright spots in our every-day lives. We have all watched anxiously the discussion pro and con about this rural mail delivery question, and have kept hoping for results such as farmers have been working and planning for. Comparatively few as yet are aware of what the coming of the mail regularly every day might be made to them. We have been exceedingly fortunate in that the man who takes our milk to the creamery takes also for us all the mail we have to send to the post-office, and by nine o'clock every morning we have all the mail of the previous day, and without the trouble of hitching up and driving to town for it. Surplus apples and other favors of a like nature are returned as a return accommodation, and both parties feel more than amply repaid. But this is a digression.

While talking of hammock comfort I would add that in one more respect does this same hammock serve an excellent purpose. "That husband of mine" is always sure that he cannot take time for a noon-day nap. But he is usually lured by the hammock and his papers to lie down "for just a minute to read," when, presto! the first thing he knows nothing at all of his surroundings and the oblivion that has overtaken him. For the blessed goddess Sleep has claimed his attention and time. No, I'm never jealous of the spell she weaves about him, but always so glad that I early learned not to be overnice in my housekeeping that the spirit of homekeeping should be lost sight of.

Dusty clothes go into the hammock. But the light spread put into it for this purpose, and the pillow-slip that the dusty head rests on will both wash. Love will wash, too, and without tarnish or fading. But it grows the stronger and brighter for all the thoughtfulness and attention and evidences of wife-love brought to bear. And men—those much-quoted "oaks" who breast so bravely the winds of adversity, and to which women "cling," you know—are extremely susceptible, none the less, to flattery and love and especial attention. But a good man and a good husband is worthy of it all. ELLA HOUGHTON.

ONIONS, THEIR USES.

BAKED ONIONS.—Peel large onions, and put them into a saucepan with plenty of water; when the water commences to bubble, turn it off, and cover the onions with fresh boiling water. Salt the onions, and let them cook slowly for three quarters of an hour. Butter a deep earthen pie-plate, place the onions upon it, sprinkle with salt and pepper, and add a lump of butter to each onion; put a little stock or water in the plate, and scatter crumbs over the whole; bake in a slow oven about three quarters of an hour. Serve these onions with a cream dressing to which has been added a teaspoonful of chopped parsley.

ONIONS BAKED IN MILK.—Select onions of uniform size, peel them, and partly cook them in plenty of salted water; then drain the onions, and place them in a buttered baking-dish. Heat one pint of milk to boiling-point, and mix a teaspoonful of corn-starch with a little cold milk, and stir into the boiling milk; add a tablespoonful of butter and salt and pepper to taste. Beat two eggs light, and turn the hot mixture over them; pour this into the dish with the onions, and place in a moderate oven, cooking until the onions are tender and the custard set. Serve the onions from the same dish they are baked in, and stick tiny sprigs of parsley into the custard, so that a sprig can be served with each onion.

FOR BROWN ONIONS, FOR SERVING WITH AND GARNISHING BEEFSTEAK.—If the onions are large, peel them, and cut them into thick slices or quarters. Little onions may be left whole. Soak the onions in cold water half an hour, drain this water off, and pour a small amount of water over them; cover the pan, and put over a slow fire, and cook until the water has boiled away. Put a little but-

ter into the pan, and lightly brown the onions, then partly cover the onions with clear beef stock, and season with salt and pepper; cover the pan, and cook until the onions are tender, though retaining their shapes. Place a broiled steak on a hot platter, and arrange the onions around it. After the steak has been seasoned with butter, salt and pepper, pour the little gravy remaining in the pan over the meat, garnish with parsley, and serve.

Another mode of preparing onions for garnishing poultry or meat is: Peel one pint of small white onions, cover them with water, cook ten minutes, drain off this water, and replenish with fresh boiling water; let boil for five minutes longer, before turning them upon a sieve to drain. Melt some butter in a frying-pan over a moderate fire, put in the onions, and sprinkle them lightly with sugar, and fry a nice brown, rolling them around with a fork so they will be evenly colored. Take the onions up with a wire spoon, and put them in clear, rich soup jelly, adding a lump of sugar; place the pan on the fire, let the onions cook a few moments, turning them over in the liquid stock, so each part will be covered with a rich glossy covering; place them around on the meat-dish.

What is a nicer relish than these same small white onions pickled? Peel the onions, and put them into a strong brine for thirty-six hours, then drain them, and let them lie in cold water over night. Again drain them, and put them into jars, scattering among the onions a few whole cloves, a stick of cinnamon and a blade of mace; put a small red pepper into each jar. Heat two quarts of vinegar to boiling, add one half cupful of brown sugar, and turn over the onions. If the vinegar loses its strength or shows any sign of mold, drain the onions, rinse with clear water, and again cover with fresh hot vinegar.

A celebrated medical authority says: "Onions make a nerve tonic not to be despised. No other vegetable will so quickly relieve and tone up a worn-out system, and they should be eaten freely, particularly by brain-workers and those suffering with blood and nervous diseases. Nothing will clear and beautify the complexion sooner than the eating of onions in some form." A. M. M.

IT IS WORTH WHILE TO KNOW.

If you can't have but few clothes it is worth while to know the following things:

A handsome black skirt with three or four waists will give one the appearance of having quite an elaborate wardrobe.

For street wear a plain, close-fitting waist is to be preferred. Even with the one waist a goodly variety may be made to appear.

With collarettes, plastrons, fichus, etc., a plain waist may be transformed into a most elaborate-looking one.

A girl with a big black hat trimmed with satin bows, rhinestone buckles and pretty black tips solved the problem of seeming to have several hats. She took a piece of black buckram and fitted it closely around the crown of the hat, then to this piece of buckram she added her hat-trimmings. A handsome garniture for evening wear is made from a coronet of ostrich-tips, full bows of ribbon and bits of yellow lace. The color may suit the taste—pink, light green or creamy yellow.

A third trimming of black and white makes a list of three handsome hat-trimmings. These are all sewed on bandeaux of buckram, and may be easily pinned in place at a moment's notice. So one handsome hat does service for occasions.

An elaborate fichu is made to wear with the "evening" hat. This in color must harmonize with the hat, or vice versa. Light creamy yellow mousseline-de-soie, with ribbon and lace, makes a lovely and

dressy effect for the evening costume. Pale pink, with pink velvet ribbons and pearl beadings, would make another handsome waist front.

Black satin ribbon, velvet and jets make a handsome garniture to be worn with the black and white hat-trimmings, and a plait vest-front for the plaid trimmings seems to give an abundance of changes. All this may seem a little impossible, but to the deft-fingered maiden who has more brains than money, and knows how to use what she has of both commodities, there is no reason why she should not be well dressed even on a very small income.

It is also worth while to know that it is "worth while" to take care of one's gloves, ribbons, etc. The gown should be brushed carefully before putting away after wearing. The gloves should be laid straight, and the fingers pulled out a little.

The fichus and ribbons and lace belongings will need to be carefully kept in boxes, and these should be lined with scented wadding.

A perfumed bag may be hung inside of the waists and dress-skirt, and with care an extreme daintiness may be made to appear in all the feminine effects.

Try this, my dear, instead of fretting because some one else can have so much more than you can.

ROSE SEELYE-MILLER.

TESTED RECIPES.

SNOW PUDDING.—One pint of boiling water, three good-sized tablespoonfuls of corn-starch; beat the whites of three eggs to a stiff froth, moisten the corn-starch in a little cold water, then stir it into the boiling water. While still boiling add a tablespoonful of sugar, a pinch of salt and the beaten whites of two eggs; let boil a few minutes, then pour into molds to cool. For sauce make a common custard of three yolks and a scant pint of milk; sweeten and flavor to taste.

LEMON BUTTER.—One cupful of white sugar, three eggs, butter the size of half an egg, the juice and grated rind of one lemon. After beating all well together, put into a bright tin basin, and set it into a pan of boiling water; stir it constantly until it is thick. This is very good for filling tarts or a layer cake, and for small cakes if split and put together with this jelly.

GOOSEBERRY SOY.—Six pounds of gooseberries that are nearly ripe, three pounds of sugar, one pint of best vinegar; boil these together until quite thick; season to suit your taste with ground cloves and ground cinnamon. To be eaten with meats. Bottle, and seal while hot.

CREAM CAKE.—Beat two eggs in a cup, fill the cup with thick sweet cream, add one cupful of white sugar, one cupful of flour, one half teaspoonful of soda, one teaspoonful of cream of tartar. Bake in a long, narrow pan in a well-heated oven. Put buttered paper on the bottom and sides of the pan. Do not bake it too long, else it will taste rather dry.

MRS. J. B. MACKINTOSH.

COOKIES.—

- 1 quart of flour,
- 3 teaspoonfuls of baking-powder,
- 1 teaspoonful of coffee-sugar,
- 2 well-beaten eggs,
- 3 tablespoonfuls of sweet milk,
- ½ cupful of butter.

RUBY.

WRITE the Electric Wheel Co., Quincy, Ill., for a copy of their book entitled "The Preservation of Farm Profits." It is well worth a careful reading and will be sent free to all readers who mention this paper when they write. It will give you valuable information about their metal wheels, which are made with the modern wide tire and staggered oval steel spokes. If you give these wheels a trial you will wonder how you ever got along without them.

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These patterns retail in fashion bazaars and stores for twenty-five to forty cents each, but in order to increase the demand for our paper among strangers, and to make it more valuable than ever to our old friends, we offer them to the lady readers of our paper for the low price of only 10 Cents Each.

Full descriptions and directions—as the number of yards of material required, the number and names of the different pieces in the pattern, how to cut and fit and put the garment together—are sent with each pattern, with a picture of the garment to go by. These patterns are complete in every particular, there

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Sizes, 22, 24, 26, 28 and 30 inches waist.



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Sizes, 12, 14 and 16 years.



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Sizes, 32, 34, 36, 38, 40, 42 and 44 inches bust.

Your patterns are all that a person could wish for—perfect in every way—the only trouble being that I cannot get them fast enough. MRS. JULIA C. IRONS, Parkman, O.



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Sizes, 32, 34, 36, 38 and 40 inches bust.
No. 7064.—Same Pattern—Misses' Size. 10 cents.
Sizes, 12, 14 and 16 years.



No. 7127.—LADIES' WAIST, WITH FANCY BOLERO. 10 cents.
Sizes, 32, 34, 36, 38 and 40 inches bust.



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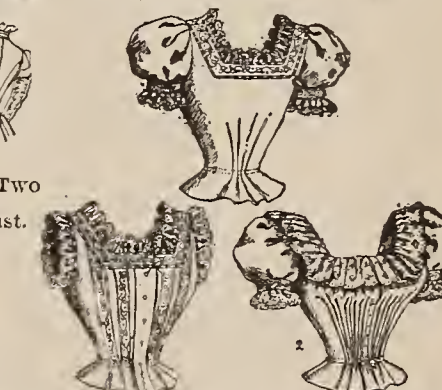
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Our Sunday Afternoon.

WHAT TIME IS IT?

What time is it?
Time to do well—
Time to live better—
Give up that grudge—
Answer that letter—

Think that kind word, to sweeten a sorrow;
Do that good deed you would leave till to-morrow.

Time to try hard
In that new situation—
Time to build up on
A solid foundation.

Giving up needlessly, changing and drifting;
Leaving the quicksands that ever are shifting.

What time is it?
Time to be thrifty;
Farmers, take warning—
Plow in the springtime—
Sow in the morning—

Spring rain is coming, zephyrs are blowing;
Heaven will attend to the quickening and growing.

Time to count cost—
Lessen expenses—
Time to look well
To the gates and the fences;

Making and mending, as good workers should;
Shutting out evil and keeping the good.

What time is it?
Time to be earnest
Laying up treasure.
Time to be thoughtful.
Choosing true pleasure;

Loving stern justice—of truth being fond;
Making your word just as good as your bond.

Time to be happy.
Doing your best—
Time to be trustful,
Leaving the rest.

Knowing in whatever country or clime,
Ne'er can we call back one minute of time.
—Liverpool Mail.

A NEGLECTED PAIN.

ONE of the beneficent arrangements of divine providence is pain. It is the signal of danger, the telegraphic alarm from the outposts intimating the presence of an enemy. Without the protection of pain a man warming his feet might burn them off, and the human system might be destroyed if it were not for the protection afforded by pain.

Many people neglect the intimation of pain; they use narcotics to deaden the sense of pain; they treat pain's warnings as if they were of no account, and by and by, when it is too late, they find that they have done themselves mischief which they can never repair.

Every pain has its use; and if we are to enjoy health we must pay attention to the admonitions of pain. Most pains, if taken in season, can be promptly relieved. Rubbing, heating, bathing and similar means frequently bring immediate relief, and if pains are obstinate the effort to relieve them should be the more persistent; but on no account should we treat pain with indifference; it is like an alarm bell; it is a warning note uttered for our protection and for our safety. We should thank God for pains, which caution us, warn us and protect us; and should immediately seek to remove the causes which produce pains, and so guard our health and lengthen out our lives.

WASTING TALK.

All human beings need instruction, counsel, guidance in a greater or less degree. No one person knows or can know everything. Some through age, experience and wisdom are qualified to be counselors and advisers. Others will not do this. They are indifferent to the welfare of those around them, and allow them to go their way and take the consequences. Others, more careful and sympathetic, seek to save the young from the evils and troubles which their experience might bring upon them. Often, however, they labor in vain; their advice is unheeded and their words are wasted. It is useless to try to pour water into a corked bottle, or to give advice to some conceited youth who knows it already, and who turns up a pretty nose, and goes on regardless of the counsel of friends, parents or any one else.

There is one school for such persons. It is a dear one. It is the school of experience. Its lessons are enforced by blighted hopes, ruined health, blasted reputations, broken hearts; but it is the only school in

which certain persons can be taught. They hate knowledge; they despise instruction. Foolishness is bound up in their hearts, and only affliction, disappointment and sorrow can drive it from them.—Common People.

GROWTH IN SERVICE TO OTHERS.

It is a well-known law in the natural world about us that whatever has no use, that whatever serves no purpose, shrivels up. So it is a law of our own being that he who makes himself of no use, of no service to the great body of mankind, who is concerned only with his own small self, finds that self, small as it is, growing smaller and smaller, and those finer and better and grander qualities of his nature, those that give the chief charm and happiness to life, shriveling up. Such a one lives and keeps constant company with his own diminutive and stunted self; while he who, forgetting self, makes the object of his life service, helpfulness and kindness to others, finds his whole nature growing and expanding, himself becoming large-hearted, magnanimous, kind, loving, sympathetic, joyous and happy—his life rich and beautiful. For instead of his own little life alone he has entered into and has part in a hundred, a thousand, aye, in countless numbers of other lives; and every success, every joy, every happiness, coming to each of these, comes as such to him, for he has a part in each and all.—Ralph Waldo Trine.

JOYFUL CHRISTIANS.

The religion of Christ is joy-giving. All who embrace it and make it a part of their life have the principle of joy implanted within them. Jesus said of his teachings and their results, "These things have I spoken unto you, that my joy might remain in you, and that your joy might be full." Sin is the fruitful source of sorrow and condemnation. To be freed from it through the forgiving love of Christ is to be filled with all joy and peace.

A Christian without joy is hardly to be imagined. For it is the very nature of Christianity in the soul to produce purity and righteousness, and where these elements are found there must be at the same time the element of joy. The Christian should always be happy. He may have troubles and losses, temptations and crosses; but in the midst of these he is happy. He is happy because he has faith in God and in Jesus Christ his Savior, and the guidance and comfort of the Holy Spirit.

TRUE CONTENT.

"It ain't so hard to be contented with the things we have," said the old woman, dolefully; "it's bein' contented with the things we haven't that's so tryin'."

"I don't know about that; I don't know," said Uncle Silas. "When we begin to look at the things our neighbors have and we haven't, we always pick out just the things we want. They live in a nice house, we say, and we have only a little one. They have money, and we need to count every penny. They have an easy life, and we have to work. We never say: They have the typhoid fever, but it did not come near us. They have a son in the insane asylum, but our brains are sound. Staggering feet go in at their grand door, but nothing worse than tired ones come home to ours at night. You see, when we begin to call Providence to account for the things that don't come to us, it's only fair to take in all kinds of things."

THE DIVINE MEASURING-ROD.

Let us measure our duty in giving. What shall be the measuring-rod?

1. Your capacity. "She had done what she could."
2. Opportunity. "As ye have opportunity do good unto all men."
3. Your convictions. "That servant which knew his lord's will and prepared not himself, neither did according to his will, shall be beaten with many stripes."
4. The necessities of others. "If a brother or a sister be naked, or destitute of daily food," etc.
5. The providence of God. "Let every man lay by him in store as God has prospered him."
6. Symmetry of character. "Abound in this grace also."
7. Your own happiness. "It is more blessed to give than to receive."
8. God's glory. "Honor God with your substance."—Watchman.

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Queries.

READ THIS NOTICE.

Questions from regular subscribers of FARM AND FIRESIDE, and relating to matters of general interest, will be answered in these columns free of charge. Querists desiring immediate replies, or asking information upon matters of personal interest only, should inclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query, in order that we may answer by mail if necessary. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

Weed-spud.—L. W. S., Milan, Ohio, writes: "In reply to a query in the July 1st number, how to get rid of large patches of burdock and soundock, you say mow them off, and then plow, etc. Now, the greatest trouble with burdock is that it grows under fences, hedges, etc., where it is impossible to plow. An experience of over forty years teaches me that the best plan is to cut under the crown, lift out the top and part of root, and withdraw the spud, leaving the hole where the root was withdrawn open. The rain-water runs into the hole and rots out the root. The spud that I have used was made of an old worn-out hoe. The neck was straightened out and the hoe cut off to three inches in width. This is inserted in a piece of hoe-handle, and then a cast-iron spade-handle placed on the end of that, making the implement about three feet long. I first used it without the spade-handle, but it made my hand sore. After I put the spade-handle on I found no trouble, and by pushing with my thigh against the back of my hand I can cut nearly every root."

Sunflower Culture.—S. M. L., Burlington, Kan., writes: "How is sunflower-seed raised for the market? What is the average yield of an acre and what is the average price for a bushel? Is it threshed like wheat? Is there always a market for it?"

REPLY:—The price of sunflower-seed varies. We know of no regular market for it. If you raise choice seed of an improved variety, like the Large Russian, you can sell it to seed dealers. This variety will yield 900 to 1,200 pounds of seed an acre. D. M. Ferry & Co.'s catalogue gives the following: "Sow the seed, as soon as the ground is fit for corn, in rows five feet apart and ten inches in the row. Cultivate same as for corn. When the seed is ripe and hard, cut off the heads, and pile loosely in a rail-pen having a solid floor, or in a corn-crib. After curing sufficiently so that they will thresh easily, flail out or run through a threshing-machine, and clean with an ordinary fanning-mill."

Sticky Fly-paper.—L. J. C., Hastings, Neb. Mix equal parts, by measure, of melted resin and castor-oil. Stir thoroughly one minute. While yet warm spread thinly and evenly on any strong paper that is not too porous. Foolscap, writing-papers, show-bills, etc., will do. Spread with a case-knife slightly warmed. Leave a narrow border to handle with. Lay the papers on tables, shelves, etc., where flies are numerous. They will soon cover the papers. Use no water. The oil prevents the resin from hardening, and does not evaporate. The oil leaves no odor when cool. Ten cents will buy enough to kill all the flies in the house.

Horse-sorrel.—A. P., Newton, Ill. The best way to get rid of horse-sorrel is to plow the land, plant it in corn, potatoes or such crops, and thoroughly cultivate. Then, after a crop of small grain like wheat, seed down to clover. A heavy crop of clover will smother such weeds as sorrel. In lawns sorrel must be cut out. Enrich the lawn with good fertilizers to make a heavy growth of grass, which will crowd out the sorrel.

Alfalfa.—J. H. B., Powell Siding, Mo. The time for sowing alfalfa is in the spring. You can get seed from any large seed firm. The price varies with supply and demand. Send five cents to Superintendent of Documents, Washington, D. C., for Farmers' Bulletin on Alfalfa, which will give full information.

VETERINARY.

Conducted by Dr. H. J. Detmers.

To regular subscribers of FARM AND FIRESIDE answers will be given through these columns free of charge. Where an immediate reply by mail is desired, the applicant should inclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Subscribers may send their veterinary queries directly to Dr. H. J. DETMERS, 1315 Neil Avenue, Columbus, Ohio.

NOTE.—Parties who desire an answer to their inquiries in this column must give their name and address, not necessarily for publication, but for other good reasons. Anonymous inquiries are not answered under any circumstances.

Bitter Milk.—C. S., Jeffersontown, Ky. "Bitter milk" may have various causes. Probably the most frequent one consists in feeding spoiled and unsuitable food. As this question has been answered several times in recent numbers of this paper, please consult the answers that have been given.

Period of Gestation.—S. F., Coloma, Wis. In cows the length of the period of gestation, rare extremes excluded, varies from eight to eleven months, or from 240 to 330 days, while the average time may be set down as 280 to 285 days. The age and the keeping of the cow and the sex of the fetus cause slight difference; so, for instance, a male fetus is usually carried a day or two longer than a female fetus, and twin calves are not carried as long a time as a single calf.

Tetanus—Gnats.—J. E. B., Wanamaker, Miss. It is not known that an attack of tetanus, terminating in recovery, in any way increases the existing predisposition; on the contrary, it is supposed that such an attack has the effect of diminishing the same, and of thus affording, if not absolute immunity, at least greater security against future attacks. Tetanus is an infectious disease, and is caused by germs (bacilli) which, as a rule at least, enter the animal organism through wounds and lesions. Unfortunately, I cannot recommend any practical means to ward off the pestiferous gnats, unless you can keep the mile away from the places where the gnats are swarming.

Vitiated Appetite.—F. M., M. Upton, N. Y. Such a vitiated appetite as is shown by your cow, which, you say, chews bones and sticks, results from food lacking necessary constituents; that is, constituents necessary for the animal organism. The principal ones are nitrogenous compounds, phosphates and lime salts. If the disease has not too far progressed, the removal of the cause, or what is the same, supplying food sufficiently rich in nitrogenous compounds—phosphates and lime salts—constitutes the remedy. Feed clover and bran, and avoid sour and sloppy food. In extreme cases a typhoid infection with apomorphin, as recommended in recent answers to similar questions, may be tried, but without a thorough change of food its effect will only be temporary.

A Hard Lump (2).—R. J. P., McCutchanville, Ind. You say your cow has a hard "lump" of the size of a walnut on her jaw below the ear, which lump is movable, does not seem to be attached to the bone, is painless, does not show any signs of breaking down, and does not inconvenience the cow. Now, there are several possibilities. In the first place, the term "lump" is very indefinite, and may mean almost anything; second, the location given is very indefinite, because if the lump is (immediately) below the ear, it is not in the jaw-bone, and if it is on the latter, the ear has nothing to do with it. You therefore probably mean that the "lump" is situated between the ear and the lower jaw, which would be in, or near, the parotid gland. Consequently, being only of the size of a walnut, movable and painless, it may be only a concretion, or stone, in the salivary duct, in which case, very likely, more or less fluctuation (caused by an accumulation of saliva) will exist above; but it is also possible that it is a tumor, or even incipient actinomycosis, in which latter case the "lump" will not remain as it is; but will grow, become painful, and finally break. If the above hints are not sufficient to enable you to make a diagnosis, have the cow examined by a veterinarian.

Bruised Withers.—J. A. C., Red Oak, I. T. If the hard swellings on both sides of the withers of your horse do not show any sign of abscess formation and not any softer spot, it may be possible to prevent the formation of fistulae, provided, you either exempt the horse from work or use a harness, a breast-collar for instance, that does not come in contact with the swelling, for then it may be expected that the latter will gradually become reduced in size, and finally, perhaps, disappear. You may, if you so desire to hasten the reduction (absorption) of the swelling, or if abscess formation has already begun, hasten the ripening of the abscess (bring the latter to a head) by making a few applications, three or four days apart, of oil of cantharides (prepared by heating one part of cantharides and four parts of olive-oil for one hour in a water bath, an operation known to every druggist). If then an abscess makes its appearance, the same must be opened at the very lowest point, and be treated antiseptically, and be kept as clean as possible. In this way fistula formation may be prevented, provided the abscess is opened in such a way as to secure perfect drainage. If on opening, such an abscess it should be found that the inner walls of the same are callous, a few injections of a concentrated solution of sulphate of copper (1 to 4) will destroy the callosity.

Looks Like Anthrax.—T. S., Grand Bay, Ala. The condition of the lungs, but particularly the morbid changes in the blood, which you describe as black, tar-like and without any coagulations and, to a certain extent, also some of the symptoms observed during life, especially if supported by other evidence, or occurring in an epizootic and fatal disease, are characteristic of anthrax. The fact that so far on your cows have become affected may be accidental or be due to local conditions, but the other fact that some animals have quickly recovered almost positively excludes the diagnosis of anthrax, because recovery from an attack of anthrax, though not impossible, is exceedingly rare, and if the cow, which was examined after death, had died of anthrax, the morbid changes usually present in liver and spleen, particularly in the latter organ, and in other parts of the body would hardly have escaped your observation; and besides this, anthrax of cattle, as a rule, becomes fatal in twelve to forty-eight hours, and only in comparatively rare cases the affected animals will remain alive from three to five days, like the cows in your vicinity. That you found the stomach (if you mean the first stomach, or paunch) full of contents, notwithstanding that the cow had not eaten anything in five days, is without any significance, because a cow that does not eat, does not ruminate, and in a cow that does not ruminate the coarse food contained in the paunch remains there a long time, so that in a cow that literally starves to death the paunch will yet contain a considerable quantity of food at the time of death; provided, of course, the animal had ceased to ruminate for some time. It can be decided whether the disease in question is anthrax or not, first, by a microscopic examination of the blood, especially of blood taken from the spleen, liver or lungs, which invariably, after the death of the animal, contains the anthrax bacilli; second, by starting an agar culture with a minimal quantity of the blood; and third, by inoculating a susceptible animal, for instance, a rabbit or a mouse. All these three tests, however, require a bacteriologist to make them; but any one of them, even a simple microscopic examination, will be sufficient to secure the diagnosis, because the appearance of the anthrax bacillus is so characteristic that it cannot very well be mistaken for any other.

The Nickel Plate Road sells Homeseekers Excursion tickets at extremely low rates, August 17th. Ask agents.

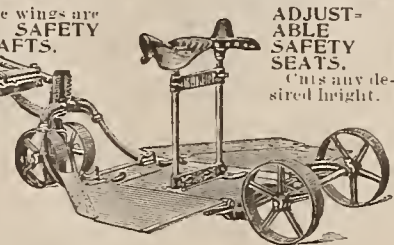
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in that most slavish job of cutting off corn by using the

SCIENTIFIC CORN HARVESTER

These side wings are hinged SAFETY SHAFTS.

SAVES LABOR SAVES CORN SAVES MONEY



ADJUSTABLE SAFETY SEATS. This any desired height.

It meets every requirement of a machine corn cutter at a price that places it within easy reach of every farmer. Send for catalogue and price.

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DRINK PURE WATER

By using the Bucket Pump and Water Purifier on Wells and Cisterns. Will Purify a Pail Well or Cistern in Ten Days' use, or Money Refunded. Draws ten gallons of water per minute. No tubing to rust, burst, or wear. Will not rust; chain and bucket made of galvanized steel. Can be set up in fifteen minutes. No attachments below the platform. Will not freeze; buckets having hole in bottom drain themselves. Makes bad water good, and good water better. Prevents Scarlet Typhoid and Malaria Fevers. Illustrated catalogue and valuable reading on pure water sent free. Address, Bucket Pump Co., 1401 Plum St., Cincinnati, O.

\$20.00 PER 1,000 for Canceled Stamps. Children coin money working for us. Send 10 cts. silver for circular. Novelty Collector, Box 4, Havilla, Va.

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AGENTS

make 100 to 300 per cent; big sale on its merit; used on every horse; exclusive territory. C. HUNTER CO., Racine, Wis.

\$50.00 PER 1,000 we pay to tack up signs. Name and addresses of 700 other for 50 cents. NOVELTY COLLECTOR, HAVILLA, VA.

ADVERTISER WILL FURNISH MONEY to secure patent and promote good invention for interest in same. Address INVESTOR, P. O. Box 672, New York, N. Y.

\$10 to \$35. High Grade Bicycles. Largest stock. All makes and models. SATISFACTION GUARANTEED. Write today for lists of bargains. E. X. BROWN, Lewis Cycle Co., Chicago, Ill.

WANTED—CRAYON ARTISTS and all beginners on Solar Prints who want work. Write Eugene Pearl, Artist, 23 N. Union Square, New York, for Art Brochure, sent free. Tells how to make \$10 to \$30 weekly at home. One agent wanted in every town.

OUTING PIN FOR 5 CENTS. This is a triple sterling silver plated ladies' stick pin, full two inches long, in two brilliant colors, hard enamel. It has a swinging bangle, on which is a lady and bicycle, with the word OUTING. The ladies' dress is blue, and the worst OUTING in vivid blue. Sample by mail, with great illustrated catalogue, all for Five Cents. (Stamps taken.) Address: LYNN & CO., 48 Bond St., New York.

The secret of success in the agency business is to have something that people really want, and then to sell it low enough for all to buy. Hence the happy results our agents continually report who are engaged in taking orders for "Peerless Atlas of the World" and "New American Cook Book," in combination with Farm and Fireside (or Woman's Home Companion). "Small prices make large trade." Join with them good commissions, and you have best profits. Write the publishers of this paper for agency rates and special advantages.

\$1.60 WORTH OF SHEET MUSIC for 10c.

That is, Any 4 Pieces of the Sheet Music Listed Below Will Be Sent to Any Address upon Receipt of 10 Cents in Silver or Stamps.

WE have made arrangements with one of the largest music-houses of Boston to furnish our readers with full-size, complete and unabridged Sheet Music at 3 cents a copy. The quality of this sheet music is the very best. The composers' names are household words all over the continent. None but high-priced copyright pieces or the most popular reprints. It is printed on regular sheet-music paper, from new plates made from large, clear type, and is in every way first-class.

No.	Music for Voice and Piano or Organ.	Usual price.	No.	Music for Piano or Organ.	Usual price.
702	Annie's Love. Duet	30	701	Catherine Waltzes	40
704	Esther's Lullaby.	35	703	Schubert's Serenade	50
706	Thinking of Home and Mother	30	705	Silvery Waves. Variations	50
708	Flossie. Waltz Song	35	707	Visions of Light. Waltz	35
710	The Sweetest Song	35	709	Our Little Agnes. Waltz.	35
712	The Bridge. Longfellow.	45	711	American Liberty March	30
714	An Outcast. Character song.	35	713	General Smith's March	35
716	Ben Bolt. Of "Tribby" Fame.	30	715	The Old Oaken Bucket	35
718	"E Dunno Where 'E Are. Comic	35	717	Impassioned Dream Waltzes	50
720	Keep Horseshoe Over Door	35	718	Boston Commandery March	35
722	Rocked in the Cradle of the Deep	30	720	Frolic of the Frogs Waltz	35
724	Lulline, Do You Think of Me?	35	722	In Hoc Signo Vincas. March	40
726	Ave Maria. From Cavalleria	35	724	Over the Waves Waltzes	45
728	Juanita. Ballad	30	726	Village Parade Quickstep	35
730	The Mission of a Rose. Song	35	728	Sweet Long Ago. Transcription	50
732	Sweet Long Ago, The	35	730	Song of the Voyager	30
734	By Normandie's Blue Hills	35	732	Corn Flower Waltzes	50
736	For the Colors. Patriotic	40	734	Black Hawk Waltz	35
738	True to the Last	45	736	Battle of Waterloo	40
740	Love Ever Faithful	40	738	Ruth, Esther and Marion School	30
742	Come When the Twilight Falls	30	740	Crack 4 March	50
744	Beautiful Face of Jennie Knott	40	742	Leap Year Schottische	30
746	That Word Was Hope	40	744	March Winds Galop	45
748	Little Boy Blue. Solo or Duet	35	746	Cleveland's March	35
750	Easter Eve. Sacred	40	748	Full of Ginger. March Galop	40
752	Mother's Cry. (Salvation Army)	35	750	Bluebird Echo Polka	35
754	Musical Dialogue. Duet	50	752	Greeting of Spring. Op. 21	30
756	Precious Treasure	40	754	Memorial Day March	35
758	When Roses Are Blooming	35	756	Twilight Echoes	35
760	Old Glory. National	40	758	Wedding March	40
762	Your Mother's Love for You	35	760	Morning Star Waltz	35
764	Vicar of Bray. Old English Song	30	762	McKinley and Hobart March	35
766	For You We Are Praying	35	764	Bells of Cornville. Potpourri	50
768	Lovely Little Nellie Dwyer	40	766	Bryan and Sewall March	35
770	Dear Heart, We're Growing Old	35	768	Flirting in the Starlight. Waltz	35
772	Ellaline. Waltz Song	40	770	Crystal Dew Waltz	35
774	In Sweet September	35	772	Storm Mazurka	35
776	My Home by the Old Mill	35	774	Scherzettino. Op. 48	35
778	Can You Keep a Secret?	35	776	Fifth Nocturn	45
780	See Those Living Pictures	40	778	Please Do Waltz	30
782	My Old Kentucky Home	35	780	Coming from the Races Galop	50
784	What Are the Wild Waves	45	782	Orvetta Waltz	40
786	When Winter Days Have Gone	35	784	Winsome Grace	40
788	Shall I See Mother's Face Again?	35	786	Anthems of Eight Nations	40
790	On the Beach. Beautiful ballad	30	788	Morning Dew. Op. 18	45
792	The Cow Bells	35	790	Estella. Air de Ballet	30
794	Old Folks at Home	30	792	Waves of the Ocean March	50
796	The Lost Chord	40	794	Spirit Lake Waltz	35
798	Kathleen Mavourneen	40	796	Fresh Life	50
800	Picture of My Mother, The	35	798	Maiden's Prayer, The	40
802	Old Sexton, The	40	800	Ancients Abroad, The March	40
804	Banks of the Beautiful River	35	802	Trifet's Grand March. Op. 182	35
806	Lottie Bell	35	804	Zephyr Waltz	35
808	Tread Softly, Angels are Calling	35	806	Ethel Polka	30
810	My Little Lost Irene	35	808	Bridal March from Lohengrin	50
812	Massa's Sleeping	35	810	Constancy. Romance	35
814	My First Wife's Departed	45	812	Under the Double Eagle March	30
816	'Tis True, Dear Heart	35	814	Tornado Galop	35
818	There's a Rainbow in the Clouds	35	816	Echoing Trumpets March	35
820	To be published August 11, 1897.		818	To be published August 4, 1897.	

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DON'T FORGET that the quality is the best; that it is sent to any address, post-paid; that all the little details are up to the standard; that the vocal pieces have full piano accompaniments; that the instrumental pieces give the bass as well as the melody; that this sheet music is equal to any published. Also, don't forget to make your selection at once, to send us the order, and to tell your friends about this great Sheet-music Offer. Satisfaction guaranteed or money refunded. Order by Numbers. Postage paid by us.

NOTE.—When more than four pieces are wanted, but less than eight or twelve pieces, send 3 cents for each additional piece ordered. Eight pieces cost 20 cents, twelve pieces 30 cents, and so on. No order accepted for less than four pieces.

Address FARM AND FIRESIDE, Springfield, Ohio.

Our Miscellany.

NEAR Vanceburg, Ky., is an apple-tree that has been bearing fruit for ninety years.

THE Alpine Cycle Co., Cincinnati, Ohio, are proud of the wheel they put on the market; and, best of all, the people who ride their wheels are delighted with them.

"How true it is that riches take unto themselves wings and flee away! You put your finger on them, and they are not there."

"Er—yes; but isn't that the Irishman's flea away?"

THE Church Kidney Cure Co., 418 Fourth Ave., New York City, have been more than ordinarily successful during the past year—a condition of affairs brought about because of the great number of cures effected by their medicines.

AID (charging furiously up)—"General, the enemy has captured our left wing. What shall we do?"

The Commander—"Fly with the other."—Philadelphia Inquirer.

THE T. World Manufacturing Co., manufacturers of Bath Cabinets, have removed from Columbus to Cincinnati. This move was made because of them being compelled to increase their capacity in order to enable them to supply the demand.

ABRAHAM LINCOLN once received a letter asking for a "sentiment" and his autograph. He replied:

"Dear Madam:—When you ask a stranger for that which is of interest only to yourself, 'always inclose a stamp.'"

"A. LINCOLN."

THE Carter Wire Fence Machine Co., Mt. Sterling, Ohio, writes to the Parvin & Doughty Advertising Agency, of Cincinnati, Ohio, saying that the sales of their excellent Fence Machine ran exceedingly good during the past year, and they add that their business is getting better right along.

NEAR Boise City, Idaho, four hundred feet below the earth's surface, there is a subterranean lake of hot water of one hundred and seventy degrees temperature. It has pressure enough to ascend to the top floor of most of the houses, and will be piped to them for heating purposes.

THE dish-washers, ironers, churns and ice-cream freezers manufactured by W. H. Baird & Co., Pittsburgh, Pa., are great favorites among agents because of the great satisfaction they give to the purchaser. An agent's second trip with these goods over a given territory is always more successful than his first one.

"Brooks," said Rivers, "you ought to do something for that cold of yours. A neglected cold sometimes leads to serious consequences."

"This cold of mine isn't neglected," crossly answered Brooks. "Five or six hundred of my friends are looking after it."

THE Bucket Pump Co., Cincinnati, Ohio, have been making numerous sales recently to owners of cisterns and wells in districts where the water is liable to become impregnated with impurities. Their pump carries and forces pure air into the water, and the contents of wells and cisterns in which the Bucket Pump is used will not become impure.

"Dick proposed to me last night."

"What did you tell him?"

"I said he had better ask mama, and what do you think the wretch said?"

"Goodness knows!"

"He said he had asked her already, and she wouldn't have him."—Boston Beacon.

THE well-known firm of James Leffel & Co., Springfield, Ohio, U. S. A., have issued a neat, new Pamphlet "D." replete with numerous illustrations and descriptions of the Throttling and Automatic Engines, with Portable and Stationary Boilers, which they are building in a variety of sizes and styles. Copy is sent free to parties interested on application to the company.

AN English scientist has made some interesting experiments as to the effect of nicotine upon the lungs and heart. He has arrived at the conclusion that a man of easy-going nature can smoke a great deal without much injury to himself, while a nervous man will damage his health seriously by smoking much. A man who takes plenty of exercise in the open air may smoke with impunity, while he who sits much at a desk must beware of the fatal fascinations of "My Lady Nicotine."

HEBREWS IN JERUSALEM.

During the last few years nearly 150,000 Hebrews have entered Jerusalem, and the arrival of another host is said to be imminent. Already the railways are opening the country between the coast and Jerusalem and Damascus, and a Hebrew migration on a large scale may cause Syria to become once more of vast importance in the East.

EXCURSION RATES TO VERMILION, OHIO.

August 2d to 23d, via the Nickel Plate Road, account Religious Meetings at Liuwood Park Assembly Grounds.

NOT EVEN IF HER CASE WERE STRONGER.

A gentleman had left his corner seat in an already crowded railway-car to go in search of something to eat, leaving a rug to reserve his seat. On returning he found that, in spite of the rug and the protests of his fellow-passengers, the seat had been usurped by one in lady's garments. To his protestations her lofty reply was:

"Do you know, sir, that I am one of the directors' wives?"

"Madam," he replied, "were you the director's only wife, I should still protest."—Pittsburg Dispatch.

SOMETHING WORTH KNOWING.

The realm of knowledge is so vast, the scope of science and inventive genius so unlimited, that something is always coming to the front which we think our feeble vision should have discerned long ago. When barbed wire was first introduced hardly a person thought of the injury likely to result to stock exposed to the insidious and obscure, or unseen barb. The Keystone Woven Wire Fence Co., with a genius that savors of true mercy for the dumb beast, has invented a farm fence that supersedes the old rail fence and the old barbed-wire fence, and supplies every purpose for which a fence is needed on the farm. It will keep stock from within from getting out, as well as the stock from the outside from getting in; it is not unsightly, is more durable, and is not destructive to stock, as was the case with barbed wire. If you want a practical farm fence, effectual, durable and harmless—a fence that has no tendency to sag between the posts from the effect of hard stretching, and that has ample provision for expansion and contraction—you should write to-day to the Keystone Woven Wire Fence Co., Peoria, Ill. (mentioning FARM AND FIRESIDE), and ask them to send you their 32-page illustrated catalogue, which gives full particulars, prices, as well as a lot of valuable information for fence-builders, etc.

A CHANCE TO SAVE.

"I can save you five thousand dollars, Mr. Moncyhags."

"How so?"

"Well, then, say you will give your daughter fifty thousand dollars as marriage portion."

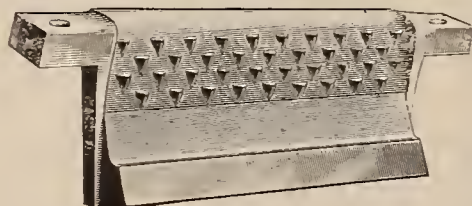
"Well?"

"Well, I'll take her for forty-five."—Harper's Bazar.

TEARING FODDER IN SHREDS.

One of the inventions for 1897, made in behalf of farmers, stockmen and dairymen, is an improved shredding attachment for feed cutters.

The illustration shows this simple attachment, which is sold at about one-fifth the cost of other shredding attachments. The work of



shredding can be done with less power when this attachment is used, than with any other shredder, as the machine need not be run at more than half the speed.

All persons interested in Feed and Ensilage Cutters will do well to make application to Heebner & Sons, Lansdale, Pa., for free catalogue, which gives valuable information relative to the cutting of green corn for ensilage, the preparation of cured fodder for bedding and feeding, etc.

\$5.95

DIAMOND STUDDED CASE!

Solid 14k Gold Plated Case ornamented with 3 Parisian Diamonds, 1m. Pearls and Rubies, with American movement, Jeweled and accurately regulated. Warranted for 20 years.

Sent C. O. D. \$5.95 with privilege of examination. Do not take from the express office if you think this watch is not equal in appearance to a \$50 watch. Mention your nearest express office and size watch wanted. Ladies' or Gent's. Only 800 in stock so order quick. Agents and salesmen coin big money. Address

EAGLE WATCH CO., 453 Broadway, New York

INTOXICURA.

A safe, sure, scientific, convenient, inexpensive Remedy for the Drink Habit. Invaluable to habitual and periodical inebriates, as well as to relapsed "Graduates." It destroys the craving for liquor in a few hours and makes a permanent cure in three to four weeks. An ideal remedy in an ideal form. Write us for circulars, prices, and other information.

THE BRUCK CHEMICAL CO., COLUMBUS, OHIO.

FAT FOLKS reduced 15 lbs. a month, any one can make remedy at home. Miss M. Ainley, Supply Ark., says, "I lost 60 lbs. and feel splendid." No starving. No sickness. Sample box, etc., 4c. **HALL & CO., B., Box 404, St. Louis, Mo.**

"WESTERN" IS THE MISSING WORD

PRIZES AWARDED IN THE JULY CONTEST.

In the July 1st and 15th issues of Farm and Fireside we offered four bicycles free to the first woman, first man, first boy and first girl who guessed the missing word in the following sentence: "The inhabitants of our country have lately had a useful lesson on this subject." We also offered a \$1 book to every one who guessed it. The missing word is "Western." The sentence is found in the farewell address of George Washington. This address is printed in most United States histories and is frequently quoted from by speakers and writers. For this reason we are surprised that not more persons discovered it or guessed it.

The first woman to guess it was
Mrs. C. J. Rhode, Olney, Illinois,
and she gets the woman's bicycle.

The first man to guess it was
J. R. Cooley, Buena Vista, Pa.,
and he gets the man's bicycle.

The first boy to guess it was
Master Edward W. Allen, Van Wert, O.,
and he gets the boy's bicycle.

The first girl to guess it was
Miss S. E. Matthess, Smyrna, O.,
and she gets the girl's bicycle.

The following-named persons also guessed the missing word correctly and will receive a copy of the book as advertised:

GIRLS.—Ollie Bricken, Chillicothe, Mo.; Lillian Stansbury, Highpoint, Ga.; L. M. Smith, 8 Logan St., Dayton, Ohio.

BOYS.—Engene Lalime, South Coventry, Conn.; J. G. Stelzenmuller, Point Clear, Ala.; Mason R. McClelland, Richmond, Ohio; F. J. Maston, Loogootee, Ind.; Morgan Stansbury, Highpoint, Ga.

MEN.—G. B. Schmucker, Staunton, Va.; W. J. Matthess, Smyrna, Ohio; J. B. Huffman, Chillicothe, Mo.; C. W. Haines, Crutley, Pa.; Adolph J. Reuter, Lebanon, Ill.; Jesse Vinson, Brinkleyville, N. C.; Albert Holzhauser, Cosgrove, Iowa; Ora E. Calvin, Box 495, Bryan, Ohio; Henry Wiley, Elizabeth, Ill.; A. J. Stansbury, Highpoint, Ga.; Geo. E. Long, Conover, N. C.; Carl Jones, Grass Valley, Cal.; E. W. Milbado, Mineral City, Va.; John H. Rogers, Barton Heights, Va.

WOMEN.—Anna B. Wolford, Irving, Ill.; Mrs. Isabelle Kelley, Wyoming, Ohio;

Miss M. E. Bick, 358 W. Moand St., Columbus, Ohio; Millie M. Lawhead, Van Wert, Ohio; Mary M. Scholl, 142 E. 5th St., Chillicothe, Ohio; Mrs. S. P. Williams, South Coventry, Conn.; Sadie R. Brown, Thompsonville, Pa.; Mrs. Sadie Cooley, Buena Vista, Pa.; Edith Walp, 412 Rebecca Ave., Wilkinsburg, Pa.; Minnie B. Haycock, Clearbrook, Va.; Bernice Baldock, 1340 N. Hillside Ave., Wichita, Kan.; Linda Spittler, Meadville, Pa.; Mrs. Lydia Satterthwaite, 258 N. Western Ave., Dayton, Ohio; Mrs. W. A. Bruner, Princeton, Ind.; Annie Carr, St. Paul, Mo.; Thirza Wen-ziker, Utica, Neb.; Mrs. J. S. Gregory, Lewisport, Ky.; Mrs. Ella Kirker, Box 257, Elmwood Place, Ohio; Esther L. Chapman, Niles, Ohio; Mrs. Adelia Calvin, Bryan, Ohio; Mrs. M. L. Stansbury, Highpoint, Ga.; Stella Evans, Severy, Kan.; Florence Camburn, Macon, Mich.; Mrs. W. G. Freeman, Murfreesboro, N. C.

The four persons who won the bicycles will surely be delighted beyond measure with their fine wheels. As soon as they have tried their prize bicycles we would like to have them write us a letter which we may print in Farm and Fireside.

This contest ought to be a lesson to those persons who know how to do a thing, but for some silly excuse keep putting it off till their chance is gone. There is a motto which all young persons ought to paste in their hats, "Don't put off till to-morrow what can be done to-day."

Our June and July contests should prove to another class of readers that when Farm and Fireside offers prizes that they positively will be awarded to the persons who win them, no matter who they are or where they live. We have already given five \$100 bicycles free as prizes this summer, and a number of other valuable prizes. In every case the prizes went to persons who are absolute strangers to us.

Our August Contest Offers another chance to get a \$100 bicycle or a cash prize. See page 19 for full particulars.

Publishers FARM AND FIRESIDE, Springfield, Ohio.

\$200 IN PRIZES

FOR WINNERS IN THE

August Word Contest

On page 19 will be found the full particulars of the Farm and Fireside Word Contest for August.

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Smiles.

TEXAS, A. D. 1897.

Away down on the Brazos,
Where the cotton grows so tall
That the pickers pick with airships
Or they cannot pick at all,
A group of men had gathered
On a somewhat sudden call.

'Twas early in the morning;
Such a morning as nowhere
On earth except in Texas
Has that quality of air
Which makes man's moral nature
Seem to want to act more square.

The group had come together
At the meeting of the ways,
With a party in the middle
Whom they didn't stop to praise,
As they tied him with a tether
And tendered him a raise.

The last sad rites were over,
When a stranger passed that way
Who was very quick to notice
That the deuce had been to pay,
And the party who had paid it
Didn't have a word to say.

"Stealin' hosses?" asked the stranger,
As he pulled up on the pike
And nodded toward the swinger.
"Well, not hardly," said Bad Ike;
"Thar ain't a hoss in Texas,
The snoozer stole a hike."

—W. J. Lampton, in Truth.

WORRIED THE LANDLADY.

THE Balder twins have been getting into trouble again. This time it was with a new boarding-house keeper who had bought out the Widow Clancy's business and didn't know there was a twin in it. The widow had always been generous to a fault—her own and everybody else's—but the new dispenser of provender had a talent for measuring and stippling and keeping tally on every biscuit that was served. She saw Harold, the thinnest twin, eating his supper, and the dimensions of his appetite fairly appalled her. She asked who he was, and was told that he was a regular boarder and belonged to the Balder family, but not a word of his being a twin.

"Laud sakes!" she said, "he must be hollow from his head to his heels. I can never make any money with such a cormorant as that to feed!"

She saw pork and beans, fried hash, eggs or toast and bread without stint disappearing under the hungry administration of a boy's appetite, and she hurried into the china-pantry and took out a small memorandum-book, and began figuring on profit and loss. She was at it some time, and when she returned to the dining-room she expected to find it empty. What was her horror to find the boy with an appetite had just received an entirely new order, which was being served. She stared for a moment like one distraught, then she tackled the boy.

"You must be hungry," she said, with withering sarcasm.

"You bet I am," said the other twin, Eugene, as he began to devour the nearest dish.

"Young man, you'll have a fit of apoplexy, and I won't be half sorry. Anybody who gorges himself with two suppers ought to die."

Eugene understood in a flash, but he only said, demurely:

"Wait until I have eaten this one—maybe I won't need any more."

The new boarding-house keeper went through the apartments in a fury, looking for the Balders to inform them that their son was eating himself to death. The first one she saw was the boy himself playing checkers with his father. Her eyes grew round.

"How on earth did you get here before me?" she asked.

"Oh, that was dead easy," said Harold, who saw the usual complications, and was happy. "I came up as soon as I finished my supper."

"But you had just begun all over again!" shrieked the tormented and perplexed woman, and then Father Balder came to the rescue, and explained about the twins. But the awe-stricken head of the commissary department said that she would sell out, for she thought there was something uncanny about the business.—Chicago Times-Herald.

A PROMPT ANSWER.

A school inspector finding a class hesitating over answering the question, "With what weapon did Sampson slay the Philistines?" and wishing to prompt them, significantly tapped his own cheek, and asked:

"What is this?"

The whole class instantly answered: "The jaw-bone of an ass!"—Tit-Bits.

WHY HE WAS LIKE THE VENUS DE MILO.

He was in love with a young woman who lives on the west side, and who never failed to entertain him on the occasion of his frequent calls, but the affair is broken off now.

On the occasion of his last call he took particular pains to make himself attractive, his avowed intention being to tell his beloved of his adoration for her. They sat for some time in the parlor of her home, and then started for a stroll in the moonlight.

After walking several blocks, during which time neither one had said much, the young woman suddenly stopped.

"You remind me of the Venus de Milo," she exclaimed.

Thinking he had at last made the desired impression, he smiled and thanked her for the supposed compliment. It encouraged him, and he proposed on the spot, but his suit was coolly rejected.

On his return home he consulted an encyclopedia, and was deeply chagrined to learn that the Venus de Milo was without arms.—Chicago Journal.

A SEASIDE ROMANCE.

They were sitting on the sands, side by side, looking out over the ocean.

"How peaceful it looks," said he.

"Yes," said she, "but how very wet."

"True," he observed, "and yet how calm and restful it appears. With you by my side I could sail on forever."

"Yes?" she queried.

"Yes," he affirmed, "forever. Will you, dearest?"

"On one condition," she replied. "I am a cautious girl, and I do not wish to be over-hasty. But I will let you make the test, and when the test is made, and you say it is successful, I will go with you."

"And that test, love?" he cried.

"You take a boat and sail forever, and after you have sailed on forever, tell me how it works," she answered.

And she left him meditating.—Harper's Bazar.

APPLAUSE FOR A HEROIC DRUMMER.

A Bangor drummer recently saw a woman enter the train at North Bucksport and rush through the car just as it was getting speedy. He coolly walked after her, and just before the fatal leap, grasped her firmly to his manly bosom. She struggled, but he only tightened his grip, saying:

"Madam, you sha'n't jump off the car and kill yourself!"

When she got her breath she shrieked:

"You big fool, I was only going out on the platform to wave my handkerchief to my friends."

A party of Bangor yachtsmen aboard the train applauded the drummer for his heroism fully half an hour and at intervals thereafter.—Springfield Republican.

THERE HE DREW THE LINE.

"Pardon me," said the polite highwayman, "but I must ask you to stand and deliver."

The coach stopped. The door opened with surprising alacrity, and a young woman with a very large hat stepped out into the moonlight. In her hand she held a small leather-covered box.

"Here they are," she said, cheerfully.

"What?" said the highwayman.

"My diamonds," said the lady. "I am an actress, you know, and—"

The highwayman leaped upon his horse.

"Madam," said he, removing his hat gracefully, "you must excuse me. I may be a highwayman, but I am not an advertisement."

—Boston Budget.

PROVISION FOR BOTH.

Smith walked up Market street the other evening with a box of candy under one arm and a big package of meat under the other.

"Hello, Smith," said Brown, "gone to house-keeping? I didn't know you were married."

"I'm not yet."

"What are you doing with that candy and meat, then?"

"Going to see my girl."

"Do you have to furnish the family with meat already?"

"Oh, no; the candy is for the girl, and the meat is for the dog. I have to square myself with both."—San Francisco Post.

WHY HE LEFT.

"So," said the middle-aged man, "you are out of a job, eh? How did you come to leave your last place?"

"I had studied the business so thoroughly," said the applicant, "that I got to thinking I knew more about it than the man who had charge of the department I was in."

"Ah! and he showed you that you didn't, eh?"

"No; the trouble was that I was darned fool enough to go and prove to him that I was right about it."

METHODICAL.

A characteristic story is told of a New England man and his wife who live very methodically. One evening, at exactly nine o'clock, they went to the kitchen to make the final preparations for the night.

"Marthy," said the husband, after a few moments, "hey ye wiped the sink dry yet?"

"Yes, Josiah," she replied; "why do you ask?"

"Well," he answered, "I did want a drink, but I guess I'll git along till the morning."

HIS CONNECTION.

Bannister, the comedian, was presented to a proud old Scotch dame.

"Who are the Bannisters?" she asked, peevishly. "I do not recollect meeting with them before."

"Madam," replied the actor, gravely, "we are closely connected with the Stairs."

"Ah! there is a good and ancient family!" cried madam. "Mr. Bannister, I am delighted to make your acquaintance."—Household Words.

IT WAS AN OVERSIGHT.

"Did you ever hear of a coroner's jury failing to agree on a verdict?"

"Why, yes; there was a railroad case here a few years back."

"How'd it happen?"

"There was one jurymen the claim agent didn't see."—Detroit News.

DURING THE PROGRESS OF THE VOYAGE.

"It required an effort to swallow you," said the whale.

"What of that?" retorted Jonah. "It will require a greater effort two thousand years from now to swallow the story."

Jonah was a true prophet.—Puck.

MAGNANIMOUS.

Latun—"My wife spent about two hours last night telling me what she thought of me."

Withim—"What did you do?"

Latun—"Oh, I let her."—Puck.

GREAT EXPECTATIONS.

"One never knows what to expect from a woman."

"Alas, no! I expected a fortune when I married."—Indianapolis Journal.

FREE.—A WONDERFUL SHRUB.—CURES KIDNEY AND BLADDER DISEASES, RHEUMATISM, ETC.

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First Prize, . . .	For the largest list of words sent us, . . .	One Bicycle (ladies' or gents'), . . .	\$100.00
Second Prize, . . .	For the second largest list, . . .	Cash, . . .	30.00
Third Prize, . . .	For the third largest list, . . .	Cash, . . .	25.00
Fourth Prize, . . .	For the fourth largest list, . . .	Cash, . . .	20.00
Fifth Prize, . . .	For the fifth largest list, . . .	Cash, . . .	15.00
Sixth Prize, . . .	For the sixth largest list, . . .	Cash, . . .	10.00
Total value of prizes, . . .			\$200.00

CONDITIONS GOVERNING THE CONTEST.

Words must be written alphabetically, on but one side of ruled paper, and numbered, beginning with 1.

Words spelled alike, but having different meanings, can be used only once. Variants will not be allowed; that is, use but one form of spelling a word.

Words (except those found in dictionaries in general use) formed with prefixes and suffixes will not be allowed.

Use no word commencing with a capital letter; as, proper nouns, adjectives derived from proper nouns, geographical names, etc.

Do not use obsolete, foreign and compound words, or abbreviations.

Other words—common nouns, adjectives, verbs, adverbs, pronouns, particles, prepositions, conjunctions and interjections—allowed. Plurals allowed.

Each letter may be used as desired, but not more times than it appears in the word "Beautiful." Work it out as follows: able, aft, ail, at, ate, bail, bait, bale, be, beat, beautiful, bet, bile, bit, bite, blue, but, etc., etc. These words may be used. Any dictionary in common use may be consulted.

The list of words must be written on separate paper from the subscription letter and signed with the contestant's name and address.

The paper may be ordered sent to one address and the premium to another.

In case of a tie, the sender of the largest list of words first received by us will get the first prize, and the sender of the largest list next received by us will get the second prize, and so on. Persons living in Springfield, Ohio, and Clark county, Ohio, will not be allowed to enter the contest.

Your list of words must be sent us during the month of August. The list will not be large, and can easily be made out. After the prize-winners are announced many will say, "Why, I could have made up that many words." Why not do it, and get a prize?

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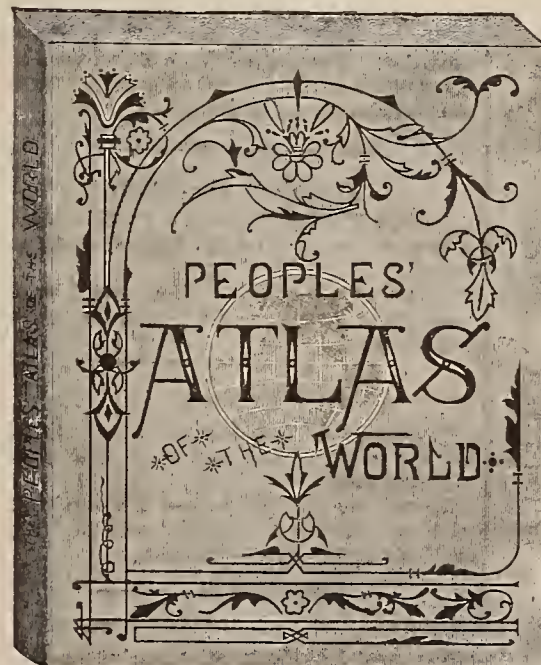
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Humor.

THE COMMON FAILING.

Mr. Meekton had been out several minutes later than usual the night before, and there was a decided chilliness at the breakfast-table. The silence was suddenly broken by the wife's remark: "Look at these senators and representatives. See how they have lingered and talked over the tariff!" "Now, Henrietta, you surely can't think of holding me responsible for that." "Not personally. But it shows a trait that is common to your kind. It shows how a man will grasp at anything as an excuse for not going home when he ought to."—Washington Star.

DELUDED.

Weary Watkins—"Don't Alabama mean 'here we rest'?" Hungry Higgins—"That's what it says in the books, and I went down there to see about it, and them long-haired, gun-luggin' farmers kep' me on the keen jump from the time I struck the state till I got out."—Indianapolis Journal.

A PUZZLER.

Little girl (De Fashion Flat)—"Is that my new brother? Ain't he cute? Did the angels bring him?" Mama—"Yes, my dear." Little girl—"Did they have flaming swords?" Mama—"N-o. Why?" Little girl—"I don't see how they got past the janitor."—New York Weekly.

STYGIAN REMARK.

"Governor Winthrop," said Peter the Great, "how do you account for the enormous quantity of old maids in Massachusetts?" "Tea," said the governor. "When the Bostonians threw all that tea into the harbor it gave the water a flavor which it has never lost, and which has been an irresistible attraction ever since."—Harper's Bazar.

UNIVERSITY ADVANTAGES.

"Billy, you have no use for your classical education now that you are married." "Well, you're way off. I use my college yell on the baby every night." "On your baby? What good does that do?" "Why, lots of good: it makes him scream for his mother like mad."—Detroit Free Press.

NO INVENTOR.

"They do say that every American is a born inventor," said the patriotic gentleman. "My husband," said the fat lady, "is an exception. He uses the same old excuses for being out late that I used to hear my father use."—Indianapolis Journal.

AN EXPERT OBSERVER.

Charley Checks—"Wouldn't yer like ter be a mupire, Sammy, an' get into all de games free?" Sammy Spots—"Naw! What would be de use? Dem fellers never see nuttin' uv de game."—Puck.

HIS FIANCEE.

"I should tell you, Baron, that I will not have a penny of my own until dear mama is called away." Baron von Stönyhausen—"Den ve muss wait vid battience for vot you call 'de happy day,' my beetle loaf!"—Tid-Bits.

THE FIJI VILLAGE AT CONEY ISLAND.

Antel—"Just look at those women! I should think they'd hate to go out with such scanty clothing." Madge—"Well, you know people with their complexions don't tan easily."—Puck.

SEEMED IMPOSSIBLE.

Solomon—"Rachel Isaacstein turned up her nose ven I proposed." His mother—"I don't see how she could do such a thing."—Brooklyn Life.

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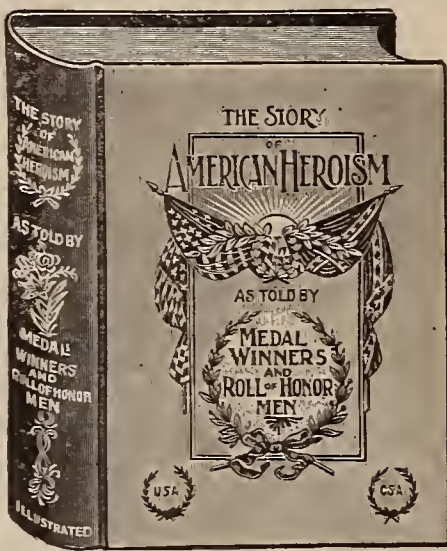
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WITH THE VANGUARD

In the Yearbook of the United States Department of Agriculture for 1896, now being distributed, is an important paper on the superior value of large, heavy seed. The experiments with heavy and light seed of various grains and vegetables on which this paper is based demonstrated very strikingly the superiority of the plump, sound, heavy seed. The plant and root development of the young seedlings from heavy seeds was larger, more uniform and better in every way than from light seeds. The seedlings from heavy seeds always showed more vigor than those from light seeds. In the experiments with barley, for example, four different sizes and weights of grains were taken, and a corresponding gradation was noted in the seedlings therefrom. This interesting paper concludes with the statement that numerous investigators, both in this country and in Europe, have found that heavy seed wheat, oats, etc., produce heavier crops in the field than lighter seed of the same variety sown under similar conditions; and there seems no room for doubt that, in the majority of instances at least, the selection of large or heavy seed will repay the plauter for all the extra time, labor and money expended.

The timely application of the lesson from these investigations is the careful and intelligent selection of seed-wheat. The bountiful crop of wheat this year now going to market at prices much higher than was expected at seeding-time will undoubtedly encourage a larger sowing this fall. But the prudent wheat-grower will consider that our competitors in growing wheat for export, Russia and Argentine, will be encouraged likewise, and may have large crops next year, with resulting lower prices. His object, therefore, will be to meet this probable competition and secure some profit by reducing the cost of growing wheat. To do this, instead of sowing a larger area by the average methods, he should sow less acreage by better methods. Within reasonable limits, the larger the yield of wheat to the acre, the lower is the cost of production and the larger the profit. Next to thorough preparation of the seed-bed nothing will yield more beneficial results than sowing the best seed that can be had. From any standard variety of wheat the

largest and heaviest grains may be selected by careful recleaning on a good fanning-mill. With a little care in adjustment and operation all the light and small grains can be blown or screened out, leaving only the best for seed.

It is safe to say that the yield of wheat can be considerably and profitably increased by this simple method of seed selection. The yield of every field of wheat is the aggregate of all the single plants in that field; the yield of every plant affects the total. No plant nor seed is too insignificant to be considered. The young seedling from a large, heavy grain starts out with a larger supply of plant-food than that from a small, light grain, and grows with more vigor during its whole lifetime. Sowing selected seed is, therefore, equivalent to giving the crop an application of plant-food specially prepared by nature for it.

In the August number of the "North American Review," that eminent statistician, Michael G. Mulhall, has an instructive article on the progress of the "Prairie States." Grouped under this head are Ohio, Illinois, Indiana, Missouri, Michigan, Wisconsin, Iowa, Minnesota, Kansas, Nebraska and the two Dakotas. Of these twelve, only seven had existence in 1850, the last five named being of later date. In population these Prairie States had 5,402,000 in 1850, 22,362,000 in 1890, and 26,320,000 (estimated) in 1897. In 1850 these states produced 312,000,000 bushels of grain—58 bushels per inhabitant—and 634,000 tons of meat; in 1890 they produced 2,633,000,000 bushels of grain—118 bushels per inhabitant—and 2,188,000 tons of meat. From 1850 to 1890 the acres improved increased from 27,210,000 to 184,300,000—from 5 to over 8 acres per inhabitant.

"In forty years," says Mr. Mulhall, "the improved area under farms showed an advance of 157,000,000 acres, equal to 13,000 acres daily. In other words, the new farms laid down and improved between 1850 and 1890 exceeded the total superficial area of the German Empire, Holland, Belgium and Denmark collectively. There has been nothing like this in the history of mankind, nor is there any part of the world where farming is on so gigantic a scale, the census of 1890 showing a grain crop equal to three tons per inhabitant, or ten times the European average. It is true that since 1890 the production of grain has declined, the average crop for the years 1893-94-95 being much less; nevertheless the production of food is colossal compared with Europe, for the Prairie States raise nearly as much grain as France, Germany and Austria collectively, and almost twice as much meat as either France or Austria. The foremost state in food production is Iowa, with an average of five tons of grain and 500 pounds of meat per inhabitant, her grain crop being larger than that of Italy or Spain, although her population is only two million souls. The value of farm products of the Prairie States is approximately \$1,757,000,000.

"Compare the production of grain and meat (averages of years 1893-94-95) and the number of agricultural hands with the figures for the other states and certain European countries:

	Hands Employed.	Tons.		Per Hand.	
		Grain.	Meat.	Grain Bu.	Meat Lbs.
Prairie States.....	3,060,000	49,700,000	2,190,000	650	1,610
Other States.....	5,260,000	23,300,000	2,760,000	177	1,170
Union.....	8,320,000	73,000,000	4,950,000	352	1,340
United Kingdom	2,530,000	7,500,000	1,100,000	117	970
France.....	7,220,000	18,100,000	1,200,000	100	370
Germany.....	9,350,000	17,100,000	1,520,000	72	360

"One hand in the Prairie States raises as much food as five can do in the most advanced countries of Europe, and this is evidently due in a great measure to the use of improved agricultural machinery, for it is a strange fact that the reaping-hook is still seen in parts of England, France and Germany.

"Such has been the industry of the western farmers that their wealth has increased ninefold in forty years, the value of farms in the twelve Prairie States in 1890 being equal to the agricultural wealth of the Austrian Empire. . . . Less than half a century has sufficed for a comparatively small number of farmers to convert the western prairies into one of the most productive regions of the globe, and to create and build up as flourishing a community as can be found to-day in either of the hemispheres. . . . Compared with the Union at large the Prairie States stand for 36 per cent of population, 47 per cent of agriculture, 34 per cent of manufactures, 31 per cent of mining and 39 per cent of wealth, so that they may be said to constitute all around 35 per cent of the Great Republic. In many respects they surpass in importance five or six European empires and kingdoms rolled into one; and yet men still living can remember when their population did not exceed that of the island of Sardinia."

THE return of prosperity is a cheerful topic. The most conservative trade journals speak in glowing terms of the great revival of business. In nearly every branch there has been a great improvement. Under the date of August 14th "Bradstreet's" says, in part: "Evidences of widespread revival in demand for merchandise and other products have become so numerous as to compel general recognition. The press has, therefore, ceased discussing whether trade has improved or not, and have begun measuring the volume of business compared with preceding periods.

"A buoyancy of feeling has appeared among buyers and sellers at New York, Baltimore, Chicago, St. Louis and Kansas City, where interior merchants have thronged this week, the like of which has not been seen for several years. Interior merchants are buying dry-goods, clothing, shoes, groceries and fancy articles far more freely than at any time since 1892. Crop conditions have improved at the South and Southwest, and merchants there are encouraged. Southern lumber-mills are not able to keep up with orders, and innumerable small consumers of iron and steel throughout central-western states are buying raw material as they have not for years.

"A nominal advance of seventy-five cents a ton for steel billets is more than a feature, as it means the confidence of makers in an early revival of the demand for iron and steel which has been so long delayed. Wheat scores an advance of seven cents on continued heavy exports and a tendency to decrease estimates of the size of the domestic crop. Wool is higher on speculative holding, and cotton yarns have advanced again. Hides and southern lumber are up, as are wheat-flour, Indian corn and oats, and last, but not least, print cloths, the market for which has so long been depressed. Prices for sugar, coffee, lard and petroleum remain unchanged, while pork is almost the only important product quoted lower than last week.

"Exports of wheat (flour included as wheat) from both coasts of the United States and from Montreal this week aggregate 4,460,519 bushels, an increase over last week of more than 1,100,000 bushels, and compared with shipments in the week a year ago of 2,635,000 bushels, 1,824,000 in 1895, of 2,979,000 bushels in 1894, and of 6,129,000 bushels in 1893. The world-wide character of the demand for our wheat and flour is illustrated by the export from both coasts of this country to such far-off and infrequent customers as Rio de Janeiro, in Brazil, Callao, in Peru, and Surabaya, in the island of Java, not to mention heavily increased shipments to Europe, China and the East. Total exports of Indian corn this week aggregate 3,275,652 bushels, against 3,223,000 bushels last week, 2,367,000 bushels in the week a year ago, 944,000 bushels in 1895, 166,000 bushels in 1894, and 1,734,000 bushels in 1893."

FARM AND FIRESIDE

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NOTES ON RURAL AFFAIRS.

Cultivation for Fertility. In an earlier issue I mentioned Professor Roberts' new hook on the "fertility of the soil," a book which particularly emphasizes an old established truth; namely, that "tillage is manure." The Rural New-Yorker, in its issue of July 31st, indulges in the following classic piece of poetry:

Professor I. P.
Roberts—says he,
Punch up the soil for its fertility.
Down in the earth
There is no dearth
Of good plant-food that will come to you free.
Harrow and hoe,
Cultivate—throw
Open the soil to the air and the sun;
Keep it stirred well,
Harvest will tell
How you have tickled the crop into fun.
Grind up the ground.
Value is found
In the steel teeth of the cultivator.

Now, while I agree with every word of this, I would like to ask how it applies to a season such as we have just gone through? Professor Roberts—and this ordinarily with good reason—suggests that for the sake of "punching up the soil for its fertility" (as the Rural poet expresses it) we should cultivate the potato-patches not less than six times. My potatoes were planted rather late; in fact, I had to plant them late in order to give the soil time to dry out properly. Then I cultivated them once, and gave them one thorough hoeing. I was ready for the second cultivation when the long-continued rainy spell set in. Since then it has been utterly impossible to do any work with hoe or cultivator in the patch, or in the corn-field either, and now the corn has grown so large and spreading, and the potato-vines have taken possession of the ground so completely, that it is out of the question to again stir the ground between the hills. The one object of cultivation, namely, the preservation of moisture, has been accomplished without any effort on my part. In fact, I could get along with a far less bountiful supply during the month

of July. The question in my mind now is whether this overabundance of water, by dissolving the plant-food in the soil, supplies the same amount of fertility to the growing crops that we could expect from frequent stirring of the soil. If not, the good and thorough soil-tiller, the one whose practice is to cultivate his potatoes six times, was bound hand and foot. At any rate, he had no advantage over the careless one whose practice is to cultivate only once or twice. In short, in a season like this—when the Lord lets it rain abundantly and alike over the just and the unjust, that is, the thorough-going soil-tiller and the careless one—the latter is just as well off as the former.

* * *

After the Rain. But the tug of war is yet to come. The weeds have had a good chance to start and develop. We could not help it. We may not be able to do anything any more in corn and potato fields, except that if there are any large weeds which we wish to get rid of, we must pull them up by hand. A little time and effort spent in this task will be well paid. Yet there are other crops which will require immediate attention. Melon, squash and cucumber vines, tomato-plants and other crops are not yet fully covering the ground, and while they are too large, perhaps, to permit the use of a horse-cultivator, they will need some stirring of the soil between the hills, in order to be pushed on to do their best, and I can see no practicable method except using the hand-hoe. With the sun beating down on the wet ground a hard crust will soon be formed all over the surface, hastening evaporation and preventing chemical action. This crust must be broken if we desire to see more fertility set free, and the advice now comes timely to "throw open the soil to the air and the sun." It is indeed such a pressing necessity that I consider it profitable to hire extra hands at this time, in order to give every inch of bare ground between vines, and indeed all late crops, a thorough stirring with the hoe. Where we can throw garden vegetables into a fairly good retail market, a slight increase in the crop of melons, squashes, cucumbers, egg-plant, etc., will liberally pay for all the labor that we may put into the job of "breaking the crust."

* * *

Growing Fruit. My indefatigable friend Professor L. H. Bailey, of Cornell University, has written another book, and as usual a very good and useful one. All progressive fruit-growers will welcome it, and use it as a guide in the management of their orchards and small-fruit patches. The book bears the title "Principles of Fruit-growing;" is published by the Macmillan Co., of New York, and contains over 500 pages with many practical and useful illustrations. Price \$1.25. Many of our friends may contend that fruit-growing is already overdone, and now offers but little temptation to people who are after money. It is probably true that the business is not by any means any more the quick way of acquiring riches that it used to be, at least in some lines. I have known a crop of peaches—covering not very many acres, either—to bring \$11,000. At the present time the same crop would probably not bring more than \$3,000 or \$4,000, if that much. It is true that some fruits nowadays sell for little, if anything, more than it costs to produce, or even to harvest and market them. And yet I am still of the opinion which I expressed ten or a dozen years ago, before the horticultural society of New Jersey; namely, that the fruit-grower is not yet suffering from overproduction, but from underconsumption, through faulty or deficient distribution.

* * *

Overproduction of Fruit. Professor Bailey says on this subject: "The probability is that there is not an absolute overproduction except in special years; that is, that there is not more fruit grown than can be consumed in one way or another. It is very likely, however, that there is frequently a relative overproduction—that there is more fruit grown than can be consumed in the markets which are ordinarily at the disposal of the grower. The difficulty is probably rather more one of unequal or imperfect distribution than of absolute overproduction of the commodity. The tendency of the times is to remedy this defect through more perfect means of

dissemination, but it is too much to hope for a perfectly equal distribution of fruits, since the fruit areas are more or less limited in their geographical distribution, whilst the fruit-consuming population is distributed far and wide. When there are heavy gluts in some markets, and fruit does not pay for the freight, there are very often other places, a few hundred miles away, in which the commodity is scarce. The recent introduction of special fruit and refrigerator cars has lessened the difficulties of distribution. But the reader should be reminded that these appliances are of use only to organizations, or to those growers who have a large quantity of produce; or, at any rate, to those localities in which so much fruit is grown that the community of interests amounts to an organization.

* * *

"There can be little doubt that fruit must tend to become cheaper rather than higher, except for special kinds and special markets, but the cost of producing it will grow less at the same time. The fruit-grower must acquire the skill to make his plantations bear in the years of least heavy crops, and thereby escape to a large extent the effects of overproduction. This can certainly be done. The very fact that there are years of overproduction and underproduction shows that fruit-growers have not yet mastered the conditions which control their plantations. In orchards, at least, there are more persons who discover their crops of fruit than there are who produce them. With the cheapening of the product the demand will be increased. The United States now leads all countries in the extent, variety, excellence and abundance of fruits, and our people are pronounced fruit-consumers; and this desire for fruit is very rapidly increasing. In particular fruits, as in grapes in the East, the price seems already to have fallen to the very lowest point of profitable production, and in these cases salvation seems to lie in the hunting out of special markets, or devising more secondary means of disposing of the product (as in manufactured goods), and especially in increasing the quality of the product and increasing the attractiveness of the packing."

* * *

There is nothing really and entirely new in these remarks of Professor Bailey, and yet they state the case plainly and comprehensively. I find a great many good things in the latest work from the professor's pen, and no doubt I shall refer to some of them later on.

T. GREINER.

SALIENT FARM NOTES.

In a recent trip of seventy or eighty miles I saw hundreds of pastures dark with ragweed. This is a pest that demands attention. It should not be allowed to rob the land of fertility and choke out the grass. It should be cut now, before its stem becomes hard as wood. With a six-foot mower a man can run over a large pasture in a short time. Have the enterbar set to run two or three inches above the ground, and the cutting will be of immense benefit to the pasture.

* * *

Don't sow wheat this season unless you have the ground in first-class condition. Wheat is a good price, and it is foolishness to throw it away by sowing it on half-prepared ground. Thousands of farmers will be obliged to buy seed, and they will have to pay a big price for it, and for that reason alone they should be certain that the soil is in the very best mechanical condition to receive the seed and induce a strong growth of the plant before a grain is sown. If for any reason any farmer is unable to put the ground in the very best condition, I would advise him to keep his money and let wheat alone.

* * *

Thousands of those who will be obliged to buy seed this fall will, for probably the first time in their lives, take into serious consideration the quantity of seed absolutely required to properly seed an acre. They are already seeking light on the subject, and are anxiously questioning those who have experimented along this line. Will three or four pecks an acre be sufficient, or must we sow five or six pecks? are the questions that are coming in from every quarter.

The rate of seeding is largely a question of soil. On rich soils wheat tillers very much more than on soils deficient in available plant-food. If your soil is rich—if it contains large quantities of plant-food that is available now, three pecks of sound, plump seed will give better results than more. In such soils three pecks of good seed sown at the right time will cover the ground with a strong growth—a perfect mat of protection before winter sets in. If the soil is thin or deficient in available plant-food, a heavier seeding is necessary, because the plants will tiller less and afford less protection to themselves from the rigors of winter. The average quantity sown is five pecks an acre, but no live farmer should be governed by custom or by averages. Every farmer should know his soil and know whether it contains sufficient fertility now available to make a strong plant growth or not. In some soils it has been found necessary to sow six pecks an acre to obtain a full stand. It does not pay to grow a half crop of any grain. If you know that six or seven pecks must be sown to produce a full crop, then by all means sow that quantity.

* * *

This rate of seeding is a matter every farmer will have to decide for himself. One living at a distance can only advise in a general way. We can say that fertile soils yield good crops from a light seeding, while thin soils yield full crops only when the seeding is heavy. From this the farmer will have to deduce his conclusions and determine whether he must seed light or heavy.

* * *

As the wheat crop in this locality is a complete failure, most of the land was planted to corn. Now many farmers are debating the question. Shall we sow among the standing corn, or wait a few weeks longer and cut the corn off before sowing? I have for many years been of the opinion that sowing wheat among corn or on the land after the corn has been cut off is like investing in a one-to-twenty-chance lottery. One may get a good crop, but the chances are twenty to one against it. If we will consider the matter carefully a few moments, we will see why. Corn is a voracious feeder, and its roots entirely fill the soil for some distance from the plant. In a field of corn these feeding-roots occupy every inch of the soil, and it stands to reason that they have appropriated every atom of available fertility in that soil. As the crop ripens these roots cease feeding, but at that period of the season nitrification has almost ceased or is very slow. The soil may be full of fertility, but it is not available, and unless the season is very favorable the wheat-plant will be unable to obtain sufficient nutriment to make a growth that will enable it to withstand the winter. In some sections, on the newer soils, a large acreage is seeded among standing corn, and very fair yields are obtained; but on the older lands, those under cultivation thirty years or more, the practice is regarded as a risky one. If one is obliged to sow on corn ground, many of the most successful wheat-growers say that the corn should be cut off as early as possible, the soil loosened with narrow-toothed cultivator and the seed drilled in, not less than six pecks of seed being sown.

* * *

Another question asked is, Where shall we buy seed? Where can good, sound seed be obtained? Some of the most enterprising grain dealers are bestirring themselves in this matter and securing supplies for their customers from localities where good crops were grown. These men can do this business much more expeditiously and economically than the individual farmer, and if they are careful to procure a good quality of seed, that has been grown in about the same latitude as that in which it is to be sown, then it would be advisable to give them your order. As their business is dealing in grain, and they expect to handle the crop produced from the seed they furnish, it is likely they will use due caution in its purchase. They have a wide acquaintance among grain dealers, and you quickly ascertain from what section supplies of good seed can be procured, and by ordering in car lots can get minimum freight rates. I would advise all who are obliged to procure seed-wheat from some other locality to consult a reliable grain dealer, and give him the order as early as possible.

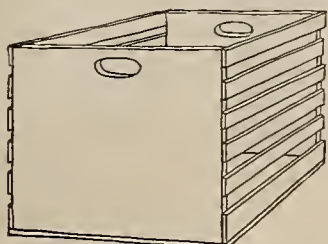
FRED GRUNDY.

Our Farm.

FARM THEORY AND PRACTICE.

THE POTATO CROP.—At this writing it is yet too early to know what the yield of late-planted potatoes will be, and a large percentage of the potato acreage is planted late; but the early crop is a comparative failure. Virginia, Kentucky and the southern portions of Ohio and Indiana supply northern markets to a large extent until far into September, and in this region the intense heat of the first half of July destroyed all chances for anything like a full crop. Potatoes cannot thrive when the mercury goes above ninety degrees, and for two weeks it was much higher in this early-potato section. We thus see that the extent of acreage is not the sole controlling factor in determining yields, and all the discussion last winter about the probable effect of prices upon future acreage, and about the advisability of continuing to plant as largely as usual upon the presumption that others would drop out of the business, was not very important. The man who had good soil, prepared it well and planted good seed is as well off with potatoes as any other crop, provided he has pushed them upon the market as soon as ready. The prices that prevailed for the early crop have given most careful growers some money.

BUSHEL BOXES.—It seems strange to me that potato-boxes holding an even bushel are not in general use everywhere. In some sections they are used, while in others they are yet wholly unknown. They save money and labor in hauling a crop, and in local markets they help to sell. Potatoes not fully mature should be culled as they are picked up, and when placed in boxes and hauled direct to market there is little bruising and skinning of the tu-



POTATO-BOX.

bers. A matured crop, intended for shipment in bulk in cars, can be hauled more cheaply in boxes than in any other way. After handling many hundreds of acres of potatoes in open beds, using shovel and baskets for unloading, I would not return to this old way if potato-boxes cost three times as much as they do. My preference is for the light and handy box that is furnished by dealers in such supplies at a reasonable price. They are much better than home-made ones, being lighter and stronger. If properly cared for their cost is not over one cent a box for each year in use.

SORTING FOR MARKET.—We farmers are slow to learn that city consumers are particular about the appearance of their supplies, whether the price is low or high, and whether the consumers are really able to have the best or not. It does not pay to send culls to a city market, either by themselves or mixed with better stuff. If the poor stuff must be sent, it should go by itself, as it does more harm when mixed with a better grade and decreases net receipts more than when freight is paid on it by itself. The home market or the farm is the place for culls. A few culls in a car-load of otherwise choice potatoes may cut the price five cents a bushel. The man who has never gone with his produce to a city market may not believe this, but the shipper who has watched this matter will bear me out in the statement. If a grower proposes to send a car-load of apples or potatoes to market, he should leave the little stuff at home. Mixing it through the car does very little good—the experienced buyer sees it just the same. When potatoes are scarce in market, a rather poor article may sell, but it is the rule with the hucksters who buy many of the early potatoes that are shipped in bulk to city markets, to pass by the potatoes altogether if they are very inferior, and load up with peaches or other fruit and vegetables, and for that day no potatoes are used by their customers. Produce must look fairly well, and the grower who would ship his produce must learn to cull out all inferior

stuff and leave it at home. In this connection comes up the matter of "priming" or "facing" goods for market. It is the rule of many shippers to sort out a few barrels of choice potatoes to be scattered over the top of a bulk car of potatoes. The practice is indefensible. Buyers discount the effect of "priming," and they like to do business with the man who guarantees the stock the same through the car. It is a fact, however, that in loading bulk potatoes from baskets or boxes the largest tubers roll down from the top while the smallest lodge more easily at the top. It is right to shovel some from the floor to the top, but a fair average is all that should be desired.

HOLDING THE CROP.—When it is not convenient to sort and ship potatoes as fast as they are dug, there is no cheaper way of storing them for a few weeks than in piles or ricks in the field, straw being used for covering. Many growers haul out the straw before digging-time, making about five piles on each acre, and the potatoes are thus left in the field until there is opportunity to market them. As wheat usually follows potatoes, these piles are in the way of preparing the ground, and it costs very little more to draw the boxes to the edge of the field and empty into a long, narrow rick. Some store in cool cellars, but there is no advantage from the additional labor if straw is in abundance. When the days are hot the covering of straw should be put on in the morning, when the rick is well cooled by the night air. Potatoes intended for seed should be left under a straw covering as late in the season as is safe, and then carefully sorted and placed in cellar or pit. The advice is often given that early potatoes be dug as soon as ripe and stored in a cool place. I do not think that it pays to dig any potatoes until the nights are cool, unless they are wanted for market, or heavy rains cause second growth. Usually they remain in the ground in good condition, and do not lose in weight as they do when exposed to the warm air.

THE BLIGHT.—Throughout the early-potato section there has been some blight this summer, and the vigor of the tubers is impaired by it. For this reason growers should exercise care in selecting seed for next year. While seed from a blighted field might give one a fair yield, the chances are against it. I believe that the spindling stand of plants this year is due in part to last summer's blight, and it will be much safer to get seed from late-planted crops or from the North, unless one's main crop has fortunately escaped the blight this hot summer. It is my observation that growers experience a greater loss from poor seed-potatoes than from any other one thing. If we could always have assurance of vigorous seed, the business would be much safer. Care concerning seed pays.

DAVID.

DIAMONDS IN THE ROUGH.

The most profitable way a farmer can spend his time is by putting on and wearing his "studying-cap." How many work from year to year, never looking one inch beyond their noses! As an example of how thoughtfulness may be turned to good account, we will suggest how from one hundred to four hundred bushels of corn may be realized from one acre of very ordinary land. One thousand watermelons can be grown on one acre easily. These will bring from ten to fifteen cents each, or from one hundred to one hundred and fifty dollars for the crop. Corn now is worth thirty cents a bushel. With these figures the reader can compute the bushels for himself. By way of rounding up this paragraph, I will add that the new melons undergoing test on my place are showing up nicely. The kinds are Sweet Heart, Duke Jones, Kluckley's Sweet and Dixie. Those wanting something fancy can get it by planting the Seminole, or any of the above kinds.

Are you thinking of planting an orchard this fall? Are there any hollows or saggy places on the site? If you can give an affirmative to the above queries, let me advise that plum-trees be set in the low places, where other fruits do not succeed. Plums will stand more water than pears, apples or peaches. If the ground has low places, some of the trees will be situated in soggy soil; therefore, let it be the plums.

This dry weather is opening up the joints in the wagon-wheels. Wash the wheels perfectly clean. Heat coal-tar to the boiling-point, roll the felloes and tires therein by suspending the wheel on a stick over the kettle till the woodwork is thoroughly saturated. Don't have the tar too hot—just boiling—and while at it, take a paint-brush and give the rest of the wheel a coat. Coal-tar is also an excellent paint to preserve wood from decay. Paint fence-posts, the part below ground, and six inches above, and they will last till the top gives way. Some have suggested to tar the posts six inches above and six inches below the surface. This plan is bad, as the wood not painted and under ground absorbs moisture, and the moisture follows the pores of the wood up under the painted section, where decay goes on about as if no tar had been applied.

What do we consider perfect farm theory and practice? This consists of four constituents—intelligent rotation of crops, home consumption of the same, manure saved and applied, and green crops turned under. Rotation rests the land, the same as a change from physical to mental work, or vice versa, rests a person. Home consumption retains at home most of the farm's fertility, and this saved and applied, with a green crop of clover, peas or buckwheat plowed under on some part of the farm each year, is, we think, as near perfection as a poor man can come. Of course, if the farmer be not too cramped for money he can also use commercial fertilizers.

In writing letters to strangers it is well to sign the first name complete instead of the initial. To show how awkwardness may be prevented by the first name instead of the initial, I will relate a real incident: Once a man advertised for some low-bush chinapius (the nuts) to plant. One of the answers was signed F. M. Thompson. When the advertiser wrote F. M. Thompson, he backed the envelop Mr. F. M. Thompson. Note his petty chagrin at finding that F. M. Thompson was a young lady. If merely the initials of the given names are written, how is a stranger to know whether the wearer of the name is a man or woman?

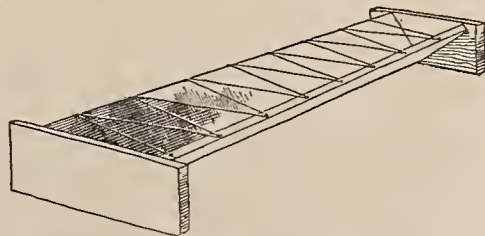
In winding up, let me jog the memory of FARM AND FIRESIDE readers about the careless, wayward ones, the ones of your acquaintance, who read no farm literature. "Cast thy bread upon the waters" by sending some needy friend the FARM AND FIRESIDE a year. But few have any idea how it might be appreciated, or of the good possible to be accomplished.

"Lives of great men all remind us
That we can make our lives sublime,
And departing leave behind us
Footprints in the sands of time."

JEFFERSON D. CHEELY.

HOG-TROUGH.

I send a drawing of a hog-trough which I find to be the best I have ever used. The wire is not in the way of throwing in the feed, as is the case where strips are nailed across the trough. The wire pre-



vents the hogs from getting in the trough and keeps the trough from spreading. Use one piece two by six, and one two by eight inches, nailed together, with ends nailed on in the usual way. Take No. 9 or 12 wire and begin four inches from the end, one side, and staple securely; then draw the wire across angling to eight inches from the head of the trough on the other side, and so on. This gives each hog a space of eight inches.

D. H. WEST.

PROPERTIES OF FOOD.

The past five years have developed vast interest in some localities among thinking farmers in connection with the subject of the relative values of various kinds of feeds usually fed to farm animals. The papers have been discussing the subject to more or less extent, yet the vast majority of farmers do not apparently under-

stand the meaning of the terms used and the value of the facts stated.

It is with a view to making the subject plain and practical that I at this time undertake to discuss it, and in order to make it clear to all it may be necessary to make some statements that will appear very elementary to a few.

In feeding our animals we should keep in view the fact that the food is to perform several functions. It is too frequently looked upon as a mere fattening process, while the real object should be to supply muscle and energy. Most foods contain a relatively small proportion of fat-producing elements. In cold weather this proportion of fat-formers should be greater than in hot weather. But at all times the food should contain elements to repair the natural waste of the various portions of the animal body.

The animal body is made up chiefly of the mineral elements, such as form the bones or skeleton, the nitrogenous elements, found in the muscles, the fats, which not only form accumulated masses in various portions, but are also found in minute particles even through what is usually termed lean meat; and in addition to these solids there is a large per cent of water, usually placed at about one half the animal's weight, or more properly varying in animals from two fifths to three fifths. From two to five per cent is ash, chiefly in the bones. The amount of fat varies with the condition of the animal, and may be as low as five per cent or as high as one third of the entire weight of the animal, as in very fat hogs. The nitrogenous portions are found in the skin, bones, muscles, internal organs, brain and nerves. All these are gradually wearing out just as various parts of a machine, and this wear must be repaired, not by replacing with new parts, but by supplying new materials for their growth in the food the animal consumes.

The feed stuffs contain various elements, but for practical purposes we usually consider the amount of dry matter the food contains after allowing for the water it possesses. The amount of protein which is to build up muscle, supply the wear of the organs, and in dairy animals or those nursing young, to furnish the materials for the milk, the carbohydrates, which supply energy and life, and the fats, which furnish the fuel to maintain animal heat.

In case of an animal in poor flesh, the protein and carbohydrates are called upon to supply heat in cold weather, but the fats can never be turned into muscle. Scientists tell us that for the purpose of supplying heat a pound of fats is worth about two and one fourth times as much as a pound of either protein or carbohydrates. This is based on the amount of heat required to raise the temperature of a pound of water four degrees. Thus, a pound of digestible protein or carbohydrates will supply 1,860 units of heat, or calories of heat, as the scientist would express it, while a pound of digestible fat will supply 4,220 calories. It will thus be seen that it is important that all animals should be in good condition at the beginning of winter. They thus have a stock of fuel laid by, as it were, to meet any emergency. The importance of good shelter is another point to be kept in mind, for it is poor economy to try to warm up all outdoors with animal heat when the thermometer marks below the freezing-point. The animal heat must be maintained, and without proper shelter more feed must be consumed, and more body-fats utilized.

Then, too, as to the water. If ice-cold, it must first be warmed by the animal heat before the regular functions of the organs can again come into active use. The milk-cow must not only keep up the proportion of water in the body, assist rumination and digestion, but furnish the eighty-seven per cent of water required in her milk. Ordinarily a cow in full milk should have each day a gallon of water for every hundred pounds of live weight. This should be accessible at all times, that she may take it in such quantities and at such times as she may choose. It is poor policy to water such animals only once a day, as some dairymen advocate. The system is then overloaded. The food is too liquid to be raised for rumination. The system must dispose of a portion, and before the next watering-time the food becomes too dry. Of course, where silage, roots or other succulent foods are largely used this difficulty is overcome in a measure, but even then I think water should be accessible at all times.

JOHN L. SHAWVER.

Our Farm.

DRYING OFF THE COWS.

A GREAT many farmers and dairymen still adhere to the practice of having the cows go dry in the winter months, and so come fresh into milk in spring. The plan has its advantages, although many are changing about, and have their calves dropped in the fall, and so have fresh cows in winter. Better prices for butter are obtained, on the average, but there are some disadvantages to offset this. At whatever season the cows are dried off, it is important that it be done with care.

If milk is allowed to remain in the udder, even in very small quantities, it becomes thick and coagulated, and acts as a foreign substance, producing irritation, and hardening forms kernels, or knots, which in one form or another are liable to affect injuriously or destroy one or more quarters of the udder, or form obstructions in the teats. The whole structure of the udder is a complicated and delicate affair. From our system of intense breeding to extend and enlarge the milking habit a great deal of our dairy stock requires special handling and special care to keep them in good health and in the best condition for profitable service in the dairy.

When cows begin to fail in their milk the supply of blood to the gland becomes less, and when milk is left in the udder a portion will be absorbed in the system. This is nature's method to rid the glands of a substance which requires to be removed. But when the milk coagulates the casein in the milk hardens and remains; and when the cow comes into milk again this hardened casein acts like an irritant, often causing violent inflammation, and then we have swelled bag, garget and other glandular troubles. I believe it to be true that three fourths of the troubles affecting the udder of cows at calving-time are due to drying off the cows at the close of the milking period before coming in again.

Cows cannot be dried of their milk at once, and some cows continue to secrete milk in small quantities for a long time. In such cases, and when the cow is called "dry," she should have her udder examined from time to time, and the teats tried to see if any milk can be drawn. At first the trial should be made at intervals of two or three days, and what milk there is found should be thoroughly drawn. Then longer intervals may elapse between the trials. This is work that cannot be safely entrusted to "help," but needs to be performed under the eye of the owner. There is no more important thing in the care and management of a dairy than proper attention to drying off the cows. And the experienced dairyman well knows that it is the best milkers and butter-producers that need the most care in this particular. Then be sure that the work is done properly—trust no eye but your own—and when your herd comes in milk next spring you will realize the value of this advice.

THE MECHANIC'S COW.

The cost of keeping deters many a mechanic and laboring man living in the suburbs of our cities and large villages from keeping a cow and enjoying a supply of fresh dairy products. The fact is, a fairly good cow will more than pay her expense if the mechanic doesn't rate his labor for care and milking too high. If one has a family of children, a cow added to the family is frequently a rich investment, and one yielding daily dividends of health-giving luxuries.

But it is said feed is high in cities, and summer pasturage scarce and high. On that score the cost of keeping a cow will overbalance the income from her. The conclusion is accepted as a fact that the laboring man cannot indulge in the luxuries of fresh butter, sweet cream and milk of his own production on account of the cost. Let us analyze this conclusion in the light of a representative instance. The application can be made according to location and modifying circumstances.

In the first place, there are but few laborers' families but buy at least a quart of milk daily, and one to two or more pounds of butter weekly, according to the size of the family. How much will that amount to in a year? The milk bill will be, say two dollars a month, twenty-four

dollars a year; butter, two pounds a week, twenty-six dollars a year; a total of fifty dollars, which is several dollars above what it will cost to keep a cow, as the actual figures I give of an actual instance show.

This mechanic lives in the suburbs of a city of twenty thousand inhabitants; has a rented house with a small stable attached. He keeps a cow which comes fresh in milk the last of August each year. The few weeks she goes dry, being at pasture, the expense for keeping, while affording no income, is trifling—less than one dollar and fifty cents a month. He has five in the family, and four years ago when he reckoned up his milk and butter bills for the year the amount, although they were very economical, suggested to him that if he could buy a fairly good cow she would pay her way and add to their living.

He paid thirty dollars for a high-grade Jersey three-year-old heifer. The first year the account came out about even—slightly in favor of the cow; but the luxury of having all the milk and cream they needed to use in the family stood high to the credit of the cow.

This season hay is high, worth sixteen dollars a ton, but feed is quite low. This condition of the markets led to the study of the economics of feeding. The plan pursued is as follows (I got his figures a few days ago): Hay, ten pounds; nice bright oats-straw costing ten dollars a ton, five pounds; bran, five pounds; gluten, corn and cotton-seed meal, each two pounds; this in two equal feeds daily. He will feed one hundred and eighty days, at a cost of about eighteen and one fourth cents a day. Pasturing costs him eight dollars for the season. He is now getting about fourteen quarts of milk a day. He sells two dollars and fifty cents' worth of milk a month, and churns six pounds of butter weekly from the remainder, after the family is supplied with milk and cream.

On the basis he is feeding it will cost him about thirty-three dollars to winter his cow. He will sell at least fifteen dollars' worth of milk, and average three pounds of butter a week for the time to sell, giving him thirteen dollars more, leaving the small amount of five dollars as the cost of supplying the family with milk and butter for the six months the cow is fed at the stable. The summer account shows yet more favorably.

RETAIN THE HEIFER CALVES.

It is not good dairy management to kill off or dispose of the heifer calves. The sure way to keep the dairy herd appreciating in value and production is by breeding to a higher standard. The only way for the general dairyman to do this is by retaining the best heifer calves, and have them take their places in due time in the dairy. Retain the heifer calves, and weed out the cows by the use of the scales and the milk test.

This plan includes the use of a pure-blood sire. Get a thoroughbred bull of one of the best producing strains in the breed chosen, that has for ancestors the best of milk-producers. Raise the heifer calves from the best cows; and these will include those having ancestry that were large butter-producers. The value of pedigree is apparent here, for certainly the longer the line of good ancestry, the more certain it is that the heifers will partake of the qualities of their progenitors.

An adjunct to good breeding is good feeding. This fact is recognized now more than ever before. Feed and care for these heifer calves so as to produce rapid growth and development, but do not feed with foods that will make them fat. Development of the whole system is what we want rather than size and form, as in the beef animal.

No better winter feed for the calves can be found than bran, to be fed with good hay, ensilage or corn fodder. There is hardly any danger of overfeeding with bran. It is the safest food in the dairy, and at the prices at which it is now quoted, with middlings, forms a good and economical feed in making up the grain ration for the cows.

A plant or animal must be full fed to yield the largest profit. With dairy stock the highest economy in feeding includes that course which develops the calf from its infancy in the highest degree for the purpose of its existence until it comes into the dairy, and afterward to its highest efficiency in production. L. F. ABBOTT.

EXTRACTS FROM CORRESPONDENCE.

FROM MISSOURI.—Cooper county is in the central part of the state. This is a good farming country. Wheat yields 20 bushels an acre; corn, 50 bushels; oats, 50 bushels. Improved farms are from \$20 to \$50 an acre. Fruit of all kinds does well. There are many springs, some mineral. I think there is not a more healthful place in the world. Lamine, Mo. O. B. R.

FROM FLORIDA.—This settlement is located four miles north of Tampa on Lake Townsend; one mile west of Hillshoro river, navigable; four miles east of Tampa bay, where fish and oysters abound in season. Tampa is a manufacturing center of 25,000 inhabitants, and is a good market for our products. The land is a sandy loam; pine timber interspersed with oak, and produces moderately well without fertilizing. Citrus fruits, guavas, some varieties of peaches, plums and strawberries do well if slightly fertilized. We plant in January and August—a double season. Wild land can be purchased from settlers in twenty and forty acre tracts, at \$2.50 to \$5 an acre; improved places from \$10 an acre and upward, according to improvements. A little money and a willingness to work will give any one a good start here in a genial climate near a good market. The location is a healthful one. J. P. Oak Grove, Fla.

FROM KANSAS.—The Neosho valley in La Bette county, Kansas, is considered the garden spot of the United States. Our winter is more like autumn in the eastern states. A better stock country cannot be found, as we rarely have more than two inches of snow, and that leaves in a day. Our ice for home use we get from St. Paul, Minn. We do not need the expensive farm buildings or long feeding that are required in the East. Our richest land, well improved, can be bought at from \$15 to \$30 an acre in tracts of from ten to five hundred acres. There never has been a failure of crops here since the land was bought from the Osage Indians. There has not been a cyclone or bad wind-storm of any kind since the country was opened to settlement. We have abundant warm, steady rains without wind. There are no potato-bugs, cabbage-worms, squash-bugs, ticks, fleas or "chiggers," and no bed-bugs except what are imported, and they do not stay long. There is an abundance of soft and hard water. This entire valley is free from stone, and remarkably healthful. The streams are well stocked with fish. We have hard-wood timber of large size of many kinds. Nuts are very abundant, also wild fruits. The strawberry crop was remarkably heavy this season, and is every year, also raspberries. Blackberries and dewberries grow wild in every place that is not cultivated. Such is a truthful description of Chetopa products, and any one doubting this statement, let him come and see for himself. I have a small fruit-farm near the city that is a sight in the way of vegetables and fruits. We have a good home market. O. V. Chetopa, Kan.

FROM LOUISIANA.—West Carroll parish is in the northeastern part of the state. It contains upward of 384,000 acres, about four fifths of which is "highlands" and the remainder alluvium, all susceptible of a high state of cultivation. The soil is easily drained, and very fertile, producing all kinds of field and garden crops, fruits, etc. We raise horses, mules, hogs, sheep, goats and poultry. Our summers are mild and halmy and our winters moderate and uniform, as a rule. The natural range is very good generally, and very little attention and feed are necessary, except for work-stock. Our forests abound in wild game, such as deer, turkey, bear, duck, rabbit, squirrel, quail, opossum and coon. The mast is usually ample and varied. In our streams and lakes the angler can indulge the sport the year round. We can and do raise a variety of semi-tropical fruits, such as peaches, pears, plums, apples, apricots, nectarines, quinces, damsons, grapes and Japan persimmons. Our lands produce well—from 20 to 60 bushels of corn, 20 to 35 bushels of oats; 200 to 400 bushels of sweet and Irish potatoes, one half to one half of cotton an acre; also pindars, peas, tobacco, rice, sorghum, sugar-cane, etc., in abundance, with natural fertility of soil. Water is wholesome and easily obtained at a depth of forty to fifty feet. We have two railroads in prospect; one the Louisiana, Arkansas & Missouri (known as the Hoyt road), surveyed and line permanently located, to run north and south; and the Lake Providence & Western, to run east and west. We need some people and capital to develop our goodly heritage, and we earnestly and cordially invite and would welcome with generous hearts and outstretched hands all honest, enterprising investors and home-seekers. Come while lands are plentiful and cheap. Good lands can be bought for from \$2.50 to \$5, and improved lands from \$5 to \$15 an acre, owing to location and extent of improvements. Forest, La. S. T. J.

FROM ALABAMA.—Limestone county has a healthful climate, plenty of excellent free-stone water, good land and timber. It is a good fruit country. Blackberries and fruits grow wild. Hogs get fat on mast. Cattle get their living principally all the year round. Those wishing to go into the dairy business should come here. Gardening and small-fruit growing bring good returns, as it is not far to large towns, where such products find ready sale. Homes improved and unimproved are within the reach of all. Athens, the county-seat, contains the state agricultural college; also quite a fine college for girls. Churches are plentiful. A northern man can see the advantages of the South. There is money in cotton when a bale or half a bale can be grown to the acre, and land here can be made to produce that well. J. S. C. Athens, Ala.

FROM FLORIDA.—I think Florida the place for invalids to seek for health, and for the well to keep well. We have had nearly every night so pleasant that it was no trouble to sleep. We had several hot nights, but from what I have heard northern people say it was so much nicer to sleep during the summer in Florida than in other states. We have mild winters. Just think of having ripe, fresh tomatoes on your Christmas table, as we did last year. Homes are cheap; any man who will work can soon be independent. Rent is cheap, if one does not care to buy. We want no drones here, but wide-awake men who will be good citizens. There are hundreds of northern people here who would not go back for any inducement. One woman told me she would rather live on a crust here than endure those cold winters again. All who want good homes can get them. Waldo, Fla. Mrs. W. V. P.

FROM PENNSYLVANIA.—The face of Bedford county is greatly diversified. Numerous mountains or ridges pass through nearly north and south, which are separated by very fertile valleys of irregular width. There are large quantities of ore and bituminous coal found in the mountains and ridges. Limestone is in abundance. The land is principally limestone, with red slate, black slate and sand in different parts of the county. Our delightful valleys are dotted with comfortable dwellings of healthy and prolific families, with all the comforts of life in abundance, and everything that renders life comfortable. Our wheat crop this year was very heavy. The clover-hay crop was exceedingly good; but the timothy crop was shorter than usual. The Grange is very strong in several parts of the county, and the benefit derived from it is shown by the good works of its members, who are always up to time in the science of agriculture. We hold a farmers' institute one week every winter (under the auspices of the state board of agriculture), which is well attended by the farmers of this county. Farmers are awakening from their slumbers and commencing to do more reading, thinking and economizing. Commercial fertilizers are not used as extensively at present as in the past. Farmers are raising more clover, turning more lime and plowing the two down together, enriching their soil on a much cheaper scale. Last fall I plowed down an excellent crop of clover with about one hundred and fifty bushels of lime to the acre, and just harvested the best crop of wheat I ever raised. Last spring I plowed down about four acres of good clover for corn; last fall I plowed about four acres for corn without clover, and to-day you can see where the clover was, except where I hauled my stable manure. As it was made last winter I hauled it on the corn ground, plowed last of fall. I have two other fields with good sets of young clover on them. I generally grow the common red clover, although the crimson has been grown to some extent, but is not as good as the red, as it will not stand our hard winters, especially when the ground is bare and the thermometer hovering about zero for a week at a time. Everett is our local market. Our best markets are Cumberland, at a distance of thirty miles, and Altoona, about thirty-two miles distant. Butter and eggs are hauled there by bucksters. Small fruit is raised very extensively in different parts. Bedford county furnishes many cows for the eastern dairy market. There are many dairies in the county, and they pay well. Koontzville, Pa. W. F. B.

Weak and Nervous

Pains in the Side, Heart Trouble and Great Debility—Now Strong.

"I was very weak and nervous and much run down in health, and I had severe pains in my kidneys and a heart trouble. After taking a few bottles of Hood's Sarsaparilla the pains have left me and I am quite strong." Mrs. ELLA DOLPH, 495 Spring Mill St., Mansfield, Ohio. Remember

Hood's Sarsaparilla

Is the best—in fact the One True Blood Purifier. All druggists. \$1; six for \$5. Get only Hood's.

Hood's Pills easy to buy, easy to take, easy to operate. 25c.

Our Farm.

NOTES FROM GARDEN AND FIELD.

Runnerless Strawberry.—The attentive reader of agricultural papers, bulletins and nurserymen's catalogues has recently seen a great deal written and published about the newer varieties of strawberries. Among them you have probably found mention of Parker Earle and Parker Earle, Jr.; but I have seen no mention yet of the Runnerless strawberry, which came from the same prominent grower in Texas who gave us the Parker Earles. By permission of the originator our friend Mathew Crawford, the well-known strawberry specialist of Cuyahoga county, Ohio, furnished me a few plants of this new curiosity, and I have had them in fruiting twice; once in the greenhouse, in 1896, and in open ground this year. I greatly doubt that this unique plant has any commercial value whatever, and yet I must concede that it is a most interesting novelty. It throws out no sign of a runner. It simply spreads out and makes a good, compact bush. How to propagate it is the question. I took my plants up and divided them in the same manner as one would divide a Chinese primrose; then starting the sets or single, almost rootless, plants under glass, and finally transplanting to open ground. If one could get a bed of this variety started, I believe it might be kept for many years, and with heavy feeding would bear more heavily every succeeding season. Being in hills rows could easily be kept under good cultivation and free from weeds. In its entire habit of fruiting and the fruit itself the Runnerless, or bunch, strawberry shows the characteristics of the Parker Earle and Parker Earle, Jr. The berry is medium to large in size, of good flavor and reasonable firmness, rather light in color, somewhat late. A typical berry is shown in the accompanying illustration. Plant is only fairly productive, and the variety one for pleasure rather than for profit.



* * *

Other New Strawberries.—Parker Earle, Jr., already mentioned, very much resembles Parker Earle in most respects, and the berry itself is one that will satisfy even the most fastidious taste. It is sweet and of good flavor; but here the plant lacks vigor, the foliage having a tendency to "variegation," like White Plume celery; and as to yield it has nothing to brag over. An altogether different report I can give of the "Splendid." A row of this, less than one hundred feet long (started from fifty plants, some of which had died out soon after being set out in the spring of 1896), has given us almost the entire supply for our table during the whole strawberry season. That means a good deal, for I myself during strawberry-time have not eaten more than one or two meals without at least a quart of strawberries, while all the rest of my family had all the berries they wanted at each meal, although no member of my family can put away from one to two quarts at a sitting, as I can. The crop of the "Splendid" comes medium early, and lasts well toward the end of the season. The berries are large, of fairly good flavor and fairly firm. The variety is a splendid plant-maker. Indeed, it is necessary to hold it in check, else it will cover yards of space on each side of the row with a thick mat of plants. In starting a plantation I would hereafter set the plants not less than three feet apart each way. But this tendency to produce plenty of plants also makes it enormously productive. Keep the number of runners down within reasonable limit, and have the ground very rich. Then you will not only secure plenty of berries, but also quite large ones.

* * *

Renewing an Old Plantation.—This one row of the Splendid is in just the right location for a solitary strawberry row, an asparagus-bed being on one side and a row of red raspberries on the other. So there is not space enough to do much in the way of growing vegetables, and I concluded to keep the strawberry row for au-

other season's fruiting. Immediately after strawberry-picking season I had the soil plowed away from the center of the row, leaving only a narrow strip of plants, with shallow dead-furrows on each side. These dead-furrows were filled up to the top with old manure, which again was stirred and mixed up with the loose soil by means of a fine-toothed cultivator. (See Fig. 2.) This leaves plenty of plant-food near the old plant, and a loose and well-enriched bed for the new runners to strike root in. (See Fig. 3.)

* * *

A Mexican Wonder.—If there is a strawberry which answers the description given of it in the "California Fruit Grower" of August 7, 1897, I would like some one to furnish me a few plants at a reasonable price. It is "as near perfection as has yet been attained in a strawberry."



FIG. 2.

It is a rapid and beautiful grower, with clean, healthy foliage of a dark green color. The young plants of this variety need no petting, but take hold and grow rapidly. Generally these young plants perfect a heavy crop the first season. A strange peculiarity of the Mexican strawberry is that it will yield fruit for five or six years without renewing, as against three or four crops with other varieties. It gives heavy crops all through the season in warm climates and in cold climates it yields two crops a season. The berries are larger than those of any other variety cultivated at the present day. I have all the new and old varieties, embracing about three hundred kinds, and I have a good chance to determine their value. The Marshall, Monarch of the West, Great American, Sharpless, Enormous, Australian Crimson, La France, Glen Mary, Brandywine, Rival Hudson, Enhance, etc., are among the larger berries, but the Mexican is better than any of these because it will average two quarts of fruit to the plant, and in exceptional cases three and even four quarts. The plant itself is almost faultless, attaining a height of about sixteen inches, with dense, spreading dark green leaves, which greatly protect the blossoms from frost. Last year the cold weather destroyed nine tenths of the flowers on other plants, but the Mexican pulled through in splendid shape and gave an enormous crop. The fruit is slightly conical in shape and is brilliantly colored



FIG. 3.

with a fine luster. In flavor it is rich, sweet, aromatic and altogether delicious. It is a wonderful market berry."

* * *

Here we have a wonder, indeed. But why have we not heard of it before? Is it a new seedling grown by the "California Fruit Grower's" correspondent? On second thought I incline to the belief that the editor of the "California Fruit Grower" has been imposed upon by one who has an ax to grind. If later on I find that I am mistaken in this supposition, I shall cheerfully make retraction, and give full credit where credit is due. T. GREINER.

ORCHARD AND SMALL FRUITS.

CONDUCTED BY SAMUEL B. GREEN.

INQUIRIES ANSWERED.

Moving Strawberry-plants.—J. A. B., Newark, Ohio. They can be most safely moved in the spring. Be sure to use only young, healthy plants of the strawberries and not those with black, wiry roots.

Grafting and Budding.—I. C. Hastings, Neb. This is too late to graft any kind of trees, but they may be budded at this season if the bark will still peel, and budding is more certain than grafting in the case of cherries at the North. For directions for budding see FARM AND FIRESIDE for November 1, 1896,

and for grafting, April 1, 1897. "Amateur Fruit-growing," published by the Farm Stock and Home Co., Minneapolis, Minn., at 50 cents, gives full directions for budding and grafting.

Sphinx-moth.—R. S., La Grande, Oregon. The insect received is what is known as a sphinx-moth. It is the mature form of the large tomato and tobacco worm, and is not uncommon in tobacco-growing sections.

Elderberry Wine.—M. J., Ohio. See recipe for making cherry and blackberry wine in FARM AND FIRESIDE for August 1, 1897, and make elderberry wine in the same way. I do not know anything about making rhubarb or daudelon wine.

Cranberry Culture.—T. F. C., Provo, Utah. Cranberries grow best in the mucky or peaty soils of the granitic formations of the North. They have never been a success on any soil in the prairie states of the West. Plants are seldom sold, but it is customary to set cuttings which are made about six inches long. The vines for cuttings are generally figured as so much a barrel. For prices address Thayer Fruit Farms, Sparta, Wis.

Poplars.—L. E., Danielsville, Pa. You can perhaps get trees of Ellwanger & Barry, of Rochester, New York; or Thomas Meehan, Germantown, Phil. Get small-sized trees, of what is known as black poplar, or of the Carolina poplar. Do not set poplar alone, but set every other tree of white elm, which will come on and make permanent and better trees than the poplars, which can be cut out when the elms are large enough.

Persimmon—Juneberry.—F. G., Clinton, Iowa. The native persimmon is found in southern Iowa. There are a few good kinds, but the market for this class of persimmons is very limited, and they cannot be said to have much of a market value. The Japanese persimmons are raised in considerable quantities for marketing, but are not sufficiently hardy for your location.—The Juneberry does well on any good corn soil. The fruit of the cultivated sorts is the same as that of the common service-berry, but is larger, and the plant is more dwarfish in habit. It is hardy and fruits abundantly, but the birds are so very fond of it that they are apt to get the larger part of the crop.

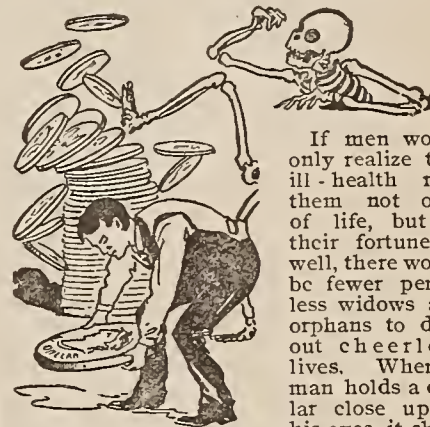
Apple-scab—Lawn.—R. C., West Ashbury Park, New York. Your crab-apple tree is affected with what is known as apple-scab, which is a very common and troublesome disease. It causes rough, hard scabs by spots on the fruit as well as injury to the foliage. Some varieties are much more subject to it than others, and the disease is most injurious in cold, moist summers. It may be prevented by spraying the foliage and fruit with Bordeaux mixture several times during the growing season. This is practised by some of the best apple-growers in the eastern states. It may not pay you to bother to do so for a few trees.—You will find that continued cutting of grass encourages the formation of a close, tough sod. In evidence of this please notice how close the sod grows where it is pastured by stock. Do not let it go to seed if you want a close sod.

Blackberry Seedlings.—J. T., Brocton, Ill. Mix the seed in three times the bulk of sand in a box, for the approach of winter; bury it in the ground outdoors so that it will stay frozen all winter. In the early spring sow the seed and sand in boxes of rich soil, and put in a hotbed, or southern window in the house. In a few weeks the seed will start and grow quite rapidly. When the plants are big enough to handle, transplant to other boxes; and when three inches high, move to a bed outdoors. The following spring they will be large enough to go into the field, and will fruit the next season. Blackberry seedlings are quite easily grown. It is not necessary to freeze the seed, but I think it best to do so. In any case I sow the seed in boxes, cover with moss and leave outdoors or in a shed until January to freeze a little, and then bring the boxes into the greenhouse. But I take it you do not have greenhouse facilities.

Fruit Garden—Low Land for Strawberries.—S. S. J., Morning Sun, Iowa, writes: "I wish to start a patch of small fruit next spring. Please let me know what varieties of blackberries, raspberries, gooseberries, currants, grapes and strawberries are best suited to southeastern Iowa. How many plants of each would be required for a family of six to have all that could be used? The place selected is a southeastern slope, and is also intended to take in the garden.—Would strawberries do well on ground that would be likely to be overflowed in a very wet season? How far apart should the rows of the different kinds of fruit be, and how far apart in the row? I am asking a good many questions. Best wishes to FARM AND FIRESIDE. I just saw an answer in regard to millet hay that I wanted."

Reply.—I would recommend a list and quantity as follows: 10 hills Snyder blackberries, 30 hills Ancient Briton blackberries, and 10 hills Lawton blackberries; 25 hills Turner and 25 hills Cutbert red raspberry; 25 hills Older and 25 hills Nemaba black raspberry; 25 hills Houghton and 5 hills Downing gooseberry; 10 hills Red Dutch, 10 hills Victoria and 5 hills White Grape currant; 10 vines Concord, 10 vines Worden and

5 vines Brighton grapes; 200 feet of row of strawberries, divided as follows: 66 Beder Wood plants, 66 plants Crescent, 68 plants Haverland. The Crescent and Haverland must be set in separate rows parallel to the Beder Wood, as they have imperfect flowers. Set the plants one foot apart in the rows. Set two plants in a hill for the raspberries and blackberries, and one plant in a hill for the currants, gooseberries and grapes. Such land would be too wet for strawberries in wet years, and as it is low the flowers would be liable to injury from the late spring frosts. The blackberries and raspberries should be four feet apart, in rows seven feet apart. The currants and gooseberries should not be nearer than five feet apart each way, and a foot extra of room each way would be better. The grapes should be planted about eight feet apart each way. The distances I have given are for fruit that is cultivated by horse, which is the most satisfactory method; but if hand cultivation alone is to be used, the distance between the rows could be shortened a foot in the case of the raspberries, blackberries and currants, though I would not advise it. You can raise vegetables between the rows of fruit for two years or more.



If men would only realize that ill-health robs them not only of life, but of their fortune as well, there would be fewer penniless widows and orphans to drag out cheerless lives. When a man holds a dollar close up to his eyes, it shuts out the light of good judgment, and looks bigger than life or death, or wife or child. The facts are that ill-health very soon puts a stop to a man's money-making powers and turns them into money-losing disabilities.

When a man's digestion is out of order and his liver sluggish, his brain gets dull, his muscles sluggish, his blood impure and every organ in the body—brain, lungs, heart, stomach, liver and kidneys—becomes crippled. A man with a crippled lung, liver, heart, brain or kidney, is a worse cripple ten times over, than a man who is minus a leg or an arm. The man who is crippled outside may live a long life but the man who is crippled inside is taking a short cut to the grave. Dr. Pierce's Golden Medical Discovery cures indigestion, makes the appetite keen, the liver active, the blood pure, and every organ healthy and vigorous. It makes blood and builds flesh up to the healthy standard. Honest dealers don't recommend substitutes.

"I wish to say to those who suffer from kidney and bladder trouble—take Dr. R. V. Pierce's Golden Medical Discovery," writes Dr. Anderson, of Carthage, Jasper Co., Mo. "A patient of mine says it is worth \$50 per bottle to any one who is afflicted as he was. Three bottles cured him entirely. Perfectly miserable he was, before taking the 'Discovery' and now is one of the happiest men in this county. Prof. Chreine would gladly sign this if he were in town. He requested me to write a testimonial and make it as strong as the English language could make it."

A \$1.50 home doctor-book FREE. For a paper-covered copy of Dr. Pierce's Common Sense Medical Adviser send 21 one-cent stamps, to cover cost of mailing only. Cloth binding 10 cents extra. Address Dr. R. V. Pierce, Buffalo, N. Y.

SCIENTIFIC Corn Harvesters

will cut your corn quicker, better and cheaper than it can be done by hand or with any other machine, not excepting a self-binder. Absolutely safe. Saves its cost many times Each Season.



You can't afford to be without it at the price.

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OUR POWER SCREW HYDRAULIC or KNUCKLE JOINT CIDER PRESSES

We guarantee to have the **GREATEST** WEIGHT POWER CAPACITY CONVENIENCE of any in the world.

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99 W. Water St., Syracuse, N. Y.

Mention this paper.

MENTION THIS PAPER WHEN ANSWERING ADVERTISEMENTS.

Our Farm.

UPLAND RICE CULTIVATION.

RICE culture is being introduced in the western states, and the upland varieties succeed well under the modern system of irrigation. Any land inclined to be damp, with an abundance of water for irrigation, will produce a crop of fifty to sixty bushels of marketable rice an acre.

The red California variety grows tall and the common white, or Yengan, short and stocky. The most profitable is the white, while the red usually yields more bushels on an acre, but does not furnish so much feed, and is more liable to rust and fall down. About one bushel of seed plants an acre, which is drilled in rows three feet apart. Broadcast sowing is not a success on upland because of the cultivation necessary to produce a crop.

The upland rice, sold under various names, such as Japan, Yengan, California, and plain white or red, is planted in March or April and harvested in July. It matures in about one hundred days from planting, if given enough water to keep the roots moist, and furnishes an excellent second crop, which makes good forage—equal to sheaf-oats. Close cultivation is necessary when the plants are young, as the sand-hurrs, water-grass and similar surface pests, caused by excessive moisture, will choke out the rice. The plants should be thinned to a distance of from four to six inches apart to insure a good yield of grain. The stalks are solid and grow very rapidly, so that in a short time, if kept clean, they get out of the way of the weeds and require no further attention.

Harvesting and threshing are performed in the same manner as with wheat or barley. The straw makes excellent feed for cows and sheep, and is much relished by horses. After cutting the rice-plants spring up and make good green feed, if cut as hay, or may be plowed under in September as a fertilizer. The rice-heads are forked and husky, between a wheat and oats stem. It is easily hulled, and when sacked is salable at about two or three cents a pound. The crop is more valuable than corn or cereals, and is grown upon land that would otherwise be worthless on account of its swampy condition. While the largest crops are obtained in tropic and semi-tropic regions, rice culture is also profitable in the warmer valleys of the temperate sections of the United States. JOEL SHOMAKER.

RED CROSS CURRANT.

The Red Cross currant is an excellent new variety for home and market, now being introduced by Green's Nursery Co.



RED CROSS CURRANT. (NATURAL SIZE.)

It was originated by Mr. Jacob Moore, of Wyoming county, N. Y., and is a result of judicious cross-breeding. The Red Cross is noted for its vigorous growth, productiveness, large-size cluster and berry, and for the superior quality of its fruit.

THE POULTRY YARD.

Conducted by P. H. Jacobs, Hammonton, New Jersey.

HOW MUCH TO THE ACRE?

The area of land required to engage in poultry-raising as a business is much less than is necessary when cattle, hogs or sheep are specialties. Poultry, therefore, offers to those of limited means better opportunities than larger stock. But the keeping of poultry on small farms has been done in a manner which could be considered impossible of success by breeders of cattle. Hundreds of attempts have been made to keep a flock of laying hens on a lot twenty by one hundred feet (a space equal to about one twentieth of an acre), or at the rate of one thousand hens to the acre. Estimating one hundred hens to equal one cow, this would be equivalent to keeping ten cows on one acre, a feat which has not been attempted by any dairyman or breeder. It is a successful farmer who can make one acre support a cow, and it may be safely stated that it is a successful man who can make an acre support one hundred hens, or one thousand hens on ten acres. Let any one who will endeavor to devote ten acres entirely to poultry estimate the work to be done, and he will find that he will not need more land, or desire a flock of larger number, but he will be more successful than by keeping a greater number on a smaller plot.

Our poultrymen and farmers must learn that poultry "farming" is one thing and raising poultry in crowded yards is another. It is the crowding—the attempting to keep large flocks on very limited spaces—that has resulted in failure. There are but few farmers who have made as much as \$1,000 a year on ten acres, yet they expect to make a profit proportionately greater on one or two acres. Where the farmer will give his whole time to the poultry business, keep only the number of hens that the land will afford, and not aim to grow two crops where only one can thrive, to use a general expression, he can secure as large or larger profit from poultry than from other stock; but as long as the farmer looks upon poultry as a side pursuit, to be left to women and children, devoting a small space to the fowl, with no attention other than to throw down a feed of corn daily and collect the eggs, if any, he will be depriving himself of better opportunities on a small farm than are offered in many other directions, especially if the farmer resides in a section where the markets are numerous, not overlooking the fact at the same time that eggs are always sold for cash and bring in daily returns.

WOOD ASHES.

Wood ashes should not be used in poultry-houses or under the roosts, for two reasons; one being that they contain the actual potash and injure the droppings by liberating ammonia, and the other is that the potash is caustic, causing the feet and legs of the fowls to be sore, especially in damp weather. It is also more profitable to apply the wood ashes on the grass-plot, where they can be more serviceable. Coal ashes, however, if sifted very fine, may be used, and freely, as they cannot be applied to a better purpose.

BUY PURE BREEDS NOW.

Just about this time of the year the breeders will have a large surplus which cannot be kept over winter, and now is the opportunity to buy, as they will sell much cheaper than during the winter or spring. There are many birds owned by breeders which are termed "culls," but their defects consist of such trivial drawbacks as a white spot on a feather, twisted comb, or lack of proper color in some section. These culls may have the same parents as gold-medal prize-winners, and are frequently superior to the prize-winners in hardiness and for general purposes of utility.

CRIPPLE CREEK INVESTMENTS.

Big fortunes have been made by a small investment in Cripple Creek stocks, and the way many have suddenly acquired wealth would make interesting reading. We can not here go into details, but if you will write us we will suggest a plan that will materially improve your pecuniary condition. We have something special to offer, and it will cost you nothing to send us your name and get on our list for Cripple Creek literature. Our facilities in the stock business are unexcelled. Address The Mechem Investment Company, Colorado Springs, Colorado.

WHAT THE EGGS COST.

If a farmer has a flock that must be confined in yards, and fed twice a day, it is doubtful if the eggs received will more than pay for the food consumed. The estimate of the cost of eggs is based on the fact that the amount necessary to be expended on a laying hen for one year, provided all food must be allowed her from the storehouse of the owner, is one dollar, while the average number of eggs laid by each hen during one year is estimated at one hundred. This makes every egg cost one cent. But it does not cost one dollar a year for each hen except where they must be kept under adverse conditions. Hens on farms cost the farmers not over twenty-five cents a hen a year because the hens are self-supporting during a portion of the time, and also because they consume and utilize a great many substances that possess no value to the farmer. It is true that the hens occupy land that is usually devoted to some crop, such as grass, fruit, etc., and which may also be occupied by the fowls entirely. The profit from eggs must depend on the cost of the food and the prices obtained. There is a wide difference between twelve cents and twenty cents a dozen for eggs, and if we estimate the cost of an egg at one cent, the difference of one cent a dozen in the price obtained may change a profit to a loss or nothing at all. There are hundreds of farmers who sell eggs at only eight cents a dozen, owing to distance and lack of transportation facilities to market, but the cost of the eggs is correspondingly as low; hence, the actual cost of an egg depends not only on the cost of the food, but the conditions affecting the keeping of poultry. East of the Mississippi river farmers should have no difficulty in securing good prices compared with the cost. It is not the winter eggs that pay best, for they may bring high prices and be scarce. The eggs which give the most profit are produced by hens that forage and secure their food without being dependent upon their owners.

THE DRONES IN THE FLOCK.

Go into your poultry-yard and count the birds that give no profit and you will be surprised. It is frequently the case that a flock is sold because the hens are considered inferior layers, yet that flock may have contained some of the most productive hens to be found. The farmer or poultryman becomes discouraged over results, yet year after year he feeds more drones than workers. Not a single fowl should be retained after it ceases to be useful, nor should pullets be kept long after they should begin to lay, if they do not fulfill expectations. When the hens become very fat, lay eggs with soft shells, or have vices, such as pulling feathers from one another, or eating eggs, it is a waste of time and an expense to keep them. Bring the fowl down to the minimum, if necessary, as it is better to have only a few hens that lay than to feed and care for a large flock that contains more drones than profitable members.

WHEN TO HATCH BROILERS.

September is not too soon to hatch chicks for broilers that are to be gotten into market by Christmas. If the incubators are started in September the chicks will be out in October, which leaves them just about the proper length of time to make growth by Christmas. The strongest competition will be in the frozen stock, but buyers will always purchase the broiler in preference to the late chick that has been kept in cold storage. It is true the prices will not be as high as in the spring, but the cost of raising the broilers in the fall will be much less, and then profits will be fully as large.

HIGH ROOSTS.

It is of no advantage to have the fowls roosting up near the roof on a high perch. They will naturally seek the highest position because of the instinct which prompts them to secure safety, but in the poultry-house it matters not whether the roost is one inch or four feet high so far as safety is concerned. There are some potent objections to high roosts. The foul air, when warm, rises to the roof, the cold air comes in from the eaves and cracks, and the birds are injured in getting on and off the high perches. The roost may be on a droppings-board, which covers the nests, but it need not be over three inches high. Use a piece of two-by-three-inch scantling,

plane it, round off the sharp edges, placing the narrow side up. This will bring the birds down to within eighteen inches of the floor, if the nests are twelve inches deep. The rear portion of the house (right behind the roost) should be papered, so as to have no cracks, but the house need not be papered in front. In summer tear off the paper to prevent harboring-places for lice. If the low roosts are adopted they will be found a valuable improvement, and the fowls will be more comfortable at night.

POULTRY ON THE FARM.

Many of the farmers who look with disdain upon anything less than a big acreage of field crops or large herds and flocks might make more net profit from poultry than they are making from greater things. Much depends upon circumstances, and on some farms poultry is wholly unprofitable; but where there is proper range for farm fowls, it would pay thousands of discouraged landowners to give attention to them. There are farmers whose net profits from this source are over one hundred dollars a year, and yet their poultry does not take any big place in their farm operations. Those who prepare for the production of eggs in winter, just as the progressive dairyman plans for the heaviest butter production when prices are highest, are making money. I know a few communities where poultry has been made the chief cash product of the farms. The housing and feeding have been made a study. DAVID.

THE LARGE LICE.

It is known that a brood of chicks that are apparently well will suddenly begin to droop and die, especially when the weather is very warm. In such cases the cause is usually lice. There may be no lice on the chicks when examined on one day, yet in two or three days more they may have the large lice on their heads. On the first symptoms of droopiness rub a drop of lard on the head of each chick and dust it well with insect-powder. Then treat the hen in the same manner, as lice go from the hen to the chicks.

INQUIRIES ANSWERED.

Lice.—M. L. V., Potts, Ark., writes: "What remedy should I use to kill lice?"

REPLY:—Frequent use of the kerosene emulsion, sprayed over every portion of the house and on roosts, nests, etc., daily for a few days will destroy them. Pure kerosene should be applied on the roosts. If the house is made clean the hens will rid their bodies of lice by dusting.

Loss of Feathers.—E. A. F., Rice, Col., writes: "I have a rooster that lost all of his feathers last fall; had none during the winter, and has none yet. What is the cause?"

REPLY:—Probably the hens are pulling the feathers from him. Remove him from the flock. Feather-pulling is a vice difficult to eradicate, and such fowls should be sold and replaced by others.

Profit on Broilers.—L. F., St. Charles, Ill., writes: "What is the profit on broilers after paying all expenses, including food, labor, etc.?"

REPLY:—It depends upon circumstances and conditions. The cost of the food to produce one pound of chick is five cents. The profit on each dollar invested for all purposes is about thirty cents, but that depends on the skill of the operator and his advantages.

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Our Fireside.

DO YOU EVER THINK?

Do you ever think as the bears drive by
That it won't be long till you and I
Will both ride out in the big, plumed hack,
And we'll never, never, never ride back?

Do you ever think as you strive for gold
That a dead man's hand can't a dollar hold?
We may tug and toil and pinch and save,
And we'll lose it all when we reach the grave.

Do you ever think as you closely clasp
Your bag of gold with a firmer grasp,
If the hungry hearts of the world were fed,
It might bring peace to your dying bed?

EVER SO.

One paragraph is missing from the pages
Of which your eye so carelessly has skipped,
And, oh, how most amazingly portentous
In its importance seems the passage clipped!

You curse the yawning gap that proves how precious
A pearl it treasured once. You're not a doubt
The one thing worth the reading in that waste was
The little item that some one's cut out.

And so, in life—two' full to overflowing
With blessings he your cup—what might be bliss
Is poisoned by the thought that Fate has robbed you
Of that sweet unknown something which you miss!
—Mary Norton Bradford, in Boston Globe.

STEVE WESTON'S LUCK.

BY CAROLINE A. PARKER.



HULDAH RAY, Farmer Bascom's "help," was paring potatoes at the kitchen sink.

Her back was toward the door, but it was still a pleasing picture that she made in her fresh cotton gown tidily fitting her trim figure, the sleeves rolled to the shoulder baring brown, well-rounded arms, while a wealth of chestnut hair—a rejected suitor called it red—waved luxuriously back from her temples and up from her shapely neck, leaving a few dainty tendrils on the way, and was finally disposed of in a great shining coil.

Steve Weston, coming through the kitchen on his way to the tool-closet, stopped midway of the room and looked at her.

Presently she turned around, a slight flush on her comely face.

"Well," she exclaimed, "what are you standing there like a post for? Haven't you got anything to do?"

"Can't you let a fellow rest a minute, I'd like to know?" Steve responded, with an embarrassed laugh.

"Rest, indeed! If that's what you want, you'd better take a chair and make yourself comfortable," and Huldah returned to her potato-paring.

"Yes, and have Ma'am Bascom come in and ketch me here? You would like that, wouldn't you?"

Huldah laughed blithely.

"Well, I don't know's I'd advise you to risk it," she said. "There she is now," as a step sounded on the stairs below. "You better be spry."

The tall, broad-shouldered fellow hurried to the tool-closet, took what he wanted, and hastened away amid Huldah's merriment, getting out of the kitchen door just as the one at the head of the cellar stairs opened and a small, sharp-visaged woman appeared, bearing in one hand a pan of apples and in the other a lighted candle.

She set down the pan, carefully blew out the light, and in a voice which harmonized to a remarkable degree with her face inquired:

"Who was that I heard talkin' up here jest now?"

"Steve," Huldah answered, concisely.

"What'd he want this time o' day?"

"Something from the tool-room. I didn't ask what."

"Well, there 'peared to be a sight o' talkin' and laughin' goin' on about somethin' or other, anyhow."

Huldah put the potatoes over to boil without replying, while Mrs. Bascom regarded her suspiciously, but said nothing further. Huldah was excellent help, and was not obliged to stay here longer than she chose. She could, and probably would, leave without ceremony upon sufficient provocation.

This necessity for refraining from giving her feelings their customary vent was a sore trial to Mrs. Bascom and the occasion of much secret delight to Steve Weston, and, if the truth be told, to her long-suffering husband as well.

Steve, to be sure, was often obliged to act as scapegoat in the case. He would not leave for another place, the mistress of the house well knew, while Huldah staid. But he willingly served in that capacity for the privilege, tantalizing though it was, of being near her.

That evening, when her work was about over for the day, Huldah went out on the

back porch to rest a few moments, and here Steve soon found her.

"It's a real pleasant night, ain't it?" he observed, taking a seat on the step where she was sitting, but at a respectful distance. "Yes," she replied, "if only a hody didn't get too tired to care."

"You musn't let Ma'am Bascom work you too hard, Huldah," he said in a low voice, drawing a trifle nearer. The possibility of being overheard would serve as sufficient excuse for both tone and movement, he considered.

"Folks have to work in the summer here," she answered, carelessly. "Guess I can stand it as well as the rest."

"Well, it's hard making a living in this country, anyhow," Steve said. "I'm going to try my luck somewhere else."

"And leave all your friends! That's too bad of you," she laughed.

"I ain't worrying about my friends caring very much," he responded, moodily; "not them that I'd like to have care a little, anyway."

"It's a pity about you!" exclaimed Huldah, banteringly. "Well, I must go in now and set my sponge. Got to be up early in the morning."

Steve sat listening as she tripped back and forth between kitchen and pantry; then he heard her go up-stairs.

Presently he rose with a sigh, and went dejectedly into the house. As he passed through the kitchen Mr. Bascom, who in his stocking feet was winding the clock, gave him a sympathetic glance. The farmer had no son of his own, and this big, kindly fellow had a warm place in his heart.

"Women are cur'us," he soliloquized, as with a sober "Good-night to you, Uncle Bascom," Steve went on to his room. "But he ain't got spunk enough in his courtin', I reckon's the trouble. I mistrust she likes him better'n any o' the rest o' the chaps."

"Well, there's one thing that'll be mighty comfortable for him if he ever does git her. She's kinder sassy and independent, to be sure; but she ain't sharp-tongued. She's real kind-hearted, too. I guess it's allers best, though, for a man not to be afraid to say his soul's his own. There's a big difference in women, and no mistake, but mebbe if I'd begun that way—yes, yes, I'm a-comin' directly," and with a sigh as profound as the younger man's had been, he shuffled slowly up-stairs.

Two weeks later Steve started for California.

"I expect I'll hear you're going to be married to Riney Jeffreys one o' these days, Huldah," he said, as he stood alone with her a few minutes under the maple that shadowed the back porch, the evening before he went away.

"Do you?" she answered, with a laugh. It was too dark for him to see her face.

"Well, there's never any telling what may happen. Riley's good-looking and doing first-rate. Guess I'll wait till he asks me, though, before I decide to have him. And we'll likely be hearing you're married to some girl in California. Pick out a real nice one, Steve."

"I sha'n't ever marry any girl in California, Huldah," he said.

At that moment a loud voice sounded through the kitchen and out into the yard.

"How are you, Mr. Bascom? Where's Steve? Is he going clear to the Pacific without saying good-by to his friends?"

"Oh, he's round som'ers," replied Farmer Bascom, hastily, blocking the door into the porch. "Jest take a seat, Nate. He'll be in directly."

Steve hurriedly put out his hand, and Huldah took it.

"Good-by, Steve," she said. "I wish you the best kind of luck."

"Good-by, Huldah," he faltered. "I—I—" and then a new voice was wafted out to them.

"Good-evening, Mr. Bascom. Where's Steve? No, thank you, I can't sit down. I'm in a big hurry. Just drove round to give him a shake o' the paw before he goes."

Steve irresolutely loosened his hold on Huldah's hand. She instantly withdrew it, and darting away, sped around the corner of the house and up the front stairs to her own room, while with a leaden heart Steve went to give his friends greeting and farewell.

"Good-evening, Jim. Hello, Nate!" he called over Mr. Bascom's shoulder, at which that individual looked around, seemingly in great surprise.

"Oh, you're out there, hey!" he exclaimed, stepping briskly aside, but with an inward groan over the turn events had taken.

Ah, could Steve only have known how extraordinarily Huldah behaved when she had shut herself into her own room! Verily, he would have been filled with amazement and taken heart of hope and joy.

For she dropped into a chair, put her head down on the little hour-glass stand, and cried. Then she lifted it proudly, and half angrily brushed away the tears.

"He's never asked me to marry him," she said. "Always beating about the bush and hinting, but never coming right out. Did he think I was going to offer myself, I wonder? I ain't going to throw myself at any man's head. And now to-night to be sear't

out so easy when he's going away, perhaps forever! If he had anything to say, why didn't he say it? I like a man that has some spunk." Then she put her head down, and cried again.

But Steve did not know.

Weeks passed, and months. Steve kept up a desultory correspondence with a mutual acquaintance, Hiram Bean, through whom he heard of Huldah. The hope of thus hearing from her being his chief inducement for writing at all, as Hiram shrewdly suspected, and that young man not only gratified his friend in this respect, but he likewise kept Huldah informed concerning Steve, and none the less because of her assumption of indifference.

"She can't fool me," he chuckled. "She thinks purty high as much o' him as he does o' her, or I miss my guess. Well, they're a couple o' idjits, but I'm a-goin' to fetch 'em together, sure's I'm a bean-pole. Steve's the best feller I know, and Huldah's the nicest girl but one," in which reservation lay the secret of Hiram's readiness to lend his influence in Steve's behalf. But for Rose Carroll he would without doubt have been actively engaged in laying siege to Huldah's heart for himself, and in no timorous spirit. Lack of self-confidence was not one of his characteristics.

"Huldah ain't to Bascom's any longer," so ran Hiram's first letter. "I dare say she'd had all she wanted of the old lady's sass. Might been a little lousum, too."

Later he wrote:

"I mistrust Huldah has give Riley the mitten. He quit keeping company with her a spell ago, and looked dre'dful down in the month for awhile; but he chirked up agen, and now he is waiting on Peeby Jones right along. Huldah don't seem to be going with anybody in partie'lar, but I persume it ain't because she don't have plenty of chances. Mebbe you better come back."

It was in the year 18—, while the boom was at its height, that Steve Weston went to California. He liked the country, was fairly prosperous, and his letters quickened the California fever already stirring Hiram Bean's pulse. Others were smitten, and further tempted by reduced railway rates, about a year after Steve's departure quite a company from his old neighborhood decided to seek their fortunes in the land of gold—gold still to be coaxed from the earth, but in the form of oranges in place of ore.

Having made up his mind to go to California, Hiram did not propose to leave his sweetheart behind, as Steve had done, and Rose was persuaded—by far more readily than the lover divined—to be married at once, and accompany him.

He had one regret in the matter.

"Rose Carroll is a mighty purty name. It does seem a pity to spile it with such a homely one as Bean," he said, remorsefully.

Then Hiram and Rose besought Huldah to join the California party.

"They say folks can earn twice as much there as here," Hiram urged. "And there's the climate and the fruit." He wanted to add, "and Steve," but he did not dare. People were generally somewhat cautious about joking Huldah, and he knew that just now it would be unfavorable to Steve's interests to so much as mention his name.

But Huldah refused to go. The climate here was good enough for her, she said, and she shouldn't go clear to California for the fruit. As to making more there, it would cost a good deal to go, and more to come back if she didn't like the country well enough to stay. She'd wait awhile, anyhow, and see how the rest liked it before she went so far from home.

"I ain't going to run after Steve Weston, if he would be as glad to have me as Hiram thinks," she said to herself. "But I ain't so sure of that, anyhow. He hasn't written a single word to me since he went away."

Just at dusk on the evening of the day before the one on which the travelers were to start Huldah was returning from the house of a neighbor to her home at her uncle's, when she heard the sound of approaching wheels. The road was a lonely one, and she withdrew into the shelter formed by the high roadside fence and a large tree.

A buggy came slowly along. There were two men in it, and one of them was talking in high-pitched, distinct tones.

"Yes," he said, "the poor feller's purty sick, I guess. Got a letter to-day from his pardner out there askin' me to fetch a box o' things he left, and I'm a-goin' after 'em now, seein' we start to-morrow. But the man said he thought 'twas more'n a chance he'd ever need 'em. Poor old chap. It's too bad. There's a girl out here that he jest thinks his eyes of, hnt you see it's this way—"

Then the voice, and surely it was that of Hiram Bean, died away.

Huldah came out of her refuge, and with set, white face hurried home. When she had reached her own room she locked the door, and began to make ready for a journey. She worked all night, and the next day when the California pilgrims were gathered at the station, Huldah drove up with her trunk, laden like the rest with the accessories of travel.

"I've concluded to go," she said, and passed on to buy her ticket, leaving the others to

speculate and comment as they would; but when she rejoined them her face discouraged inquisitiveness or remark.

"How queer the girl does look, doesn't she?" Hiram exclaimed in a low tone to his wife, when finally parcels and satchels had been disposed of, the conductor had sung out, "All aboard!" and the long western journey was begun.

The party had made themselves as comfortable as circumstances would allow, while as for Hiram and Rose, they assuredly had no quarrel with the situation. Her head reclined on his shoulder, his arm closely encircled her waist, his free hand clasped one of hers. What cared they that more than a week of steady travel lay before them?

"Yes, she does so," Rose responded. "I don't dare speak to her hardly. I wonder what makes her?"

"Oh, it's likely because she thinks we folks all mistrust she's a-goin' to California on Steve's account—which she prob'ly is—and it plagues her. But that's plum foolish when she knows what a sight he thinks of her, and how terrible glad he'll be to see her. Well, I'll be switched, if women ain't cur'us, anyhow. Jest as Uncle Bascom says."

"Now, Hiram Bean! Ain't you ashamed of yourself?" Rose exclaimed, with a pout of her red lips.

"Well, they be. Didn't you lead me a dance, though! But I've got you now, old girl, sure and fast," and his arm tightened its clasp, while his hearty laugh caused many heads to turn in their direction, and brought smiles to the faces of their own company and to the weary ones of other passengers, whose journey was not just begun.

On sped the train in slow, cumbrous haste to land its burden of expectant pilgrims on the western bounds of our republic.

Day after day passed with increasing discomfort and fatigue.

A week and more on a railway train is sufficiently irksome with all the amenities of travel—warm, regular meals, plenty of room, a comfortable seat by day and a couch at night—but these ameliorations our party did not enjoy. They traveled day and night in a common car crowded with passengers. Their meals, for the greater part of the way, consisted of provisions brought from home, stale and dry long before they were all eaten, and when these were gone, the ham-pers were replenished by cheap food purchased at stations along the route.

The monotony of the long ride was now and then relieved by a change from the car to a station platform, and occasionally, when there was a longer wait than usual, by a short excursion on foot into town or city where the stop was made. The glimpses of life in new phases, and the ever-changing scenery were also a diversion, but one whose charm was soon dulled by weariness.

So day darkened into night, night crept slowly toward the dawn, and the westward journey wore itself away.

Huldah, pale, quiet and uncomplaining, ministered tirelessly to the welfare of her fellow-passengers, both friends and strangers. She cared for the tired, restless children, entertaining the older ones with song and story, and soothing the youngest to sleep in her arms. Her thoughtfulness and attentions helped make comfortable the sick and infirm; every one in the car, indeed, had cause to bless her presence.

"I declare, Huldah, I should think you'd be clear tired out!" Rose exclaimed, peevishly, one day when the girl had hushed a fretful baby to sleep while its grateful mother rested. "It's much as ever I can do to stand it myself, let alone looking out for everybody else."

"I feel better to be doing something for folks," Huldah replied, simply. But it seemed to her that if she must have remained inactive she could not have endured this journey to the end.

And something else helped her.

While she was packing her trunk that night, which now seemed so far away, she took up the little Bible that had belonged to the mother who had died many years ago. She turned over the leaves mechanically until her eyes fell upon the words, "The eternal God is thy refuge, and underneath are the everlasting arms."

An untouched chord seemed to vibrate in her soul; and now, over and over through the long, weary days, the longer, wearier nights, the words came back to her. In a vague way they strengthened and comforted her.

Little was said in her presence about Steve; nothing of his illness, and at this she wondered.

If these people suspected that she cared for him so much that it would be better to wait until their arrival before telling her he was very sick, why had she not been told in time to go to him if she wished—as she was doing, but only because she had learned it by accident.

It must be that neither Hiram nor Rose had divined her attachment to Steve, but some other member of the party had done so; some one, perhaps, who had not known of his serious illness until the time of starting. Her friends had talked the matter over while she bought her ticket and attended to her baggage. They had decided that she

was going with them on Steve's account, though possibly in ignorance of his sickness, and if so, that it would be best for her to remain ignorant until the end of the journey.

A faint flush dyed her cheeks as she thus reflected; but, after all, she did not greatly care. Her pride was in abeyance; and yet, "I wish we had been engaged to be married," she thought.

"Will Steve's partner meet us? What will he have to tell?" Again and again she asked herself these questions, and oftener as the hours grew few between her and the answer.

The journey at last drew to a close. The last station but one was reached and left behind. Satchels were packed, parcels made secure, the children tidied, then the warning whistle sounded for their destination.

The train slowed, stopped, and with eager faces the little party hastened, as fast as cramped, tired limbs would allow, out into the air and sunshine of California.

All but one. Behind the rest, trembling so that she could scarcely stand, looking the ghost of her old self, Huldah stepped out upon the platform.

Then a tall, broad-shouldered man in the waiting company gave a quick cry, grasped her in strong, tender arms, and lifted her down.

"Why, Huldah! Huldah!" he said. She made no answer, her eyes closed, and with her head upon Steve's shoulder for the first time in her life, Huldah fainted away.

That evening, when refreshed and made comfortable with the best the leading hotel of the place could offer, and looking a little like herself once more, Huldah told Steve all about it.

"Well," he said, "I am sorry for the poor chap that's sick, whoever he is; but it was a mighty lucky mistake for me. And now, how soon will you go to the parson with me, Huldah? You won't make me wait very long, will you?" he pleaded.

"But you said you'd never marry any girl in California," she answered, and for reply he kissed her again.

"Well," she continued, with a return of the old sauciness, which no longer disconcerted her lover, "if I hadn't supposed you was sick, and maybe dying, you can be very sure I'd never have come out here, Steve Weston, when you hadn't ever asked me to marry you."

"No, I expect not," he replied, humbly, "and I don't suppose I deserve such good luck. You wished me the best kind, though, when I went away, and this is the very best I could have."

"Well, you see, I didn't dare ask you to have me, Huldah. I come pretty near it a good many times, but I felt most certain you'd say no, and it seemed as if I couldn't hear that, anyway, in the world."

"Then I thought I'd come out here and try to make a raise first."

"Not that you cared for money," he added in quick response to her look. "'Twasn't that. But I hadn't anything only myself to offer you, and that seemed mighty little. Though, if I could have been sure you cared for me, I wouldn't have waited a minute."

"But how did you know I shouldn't take up with somebody else while you was off here making money?" Huldah asked, mischievously, though her eyes were bright with tears.

"I was afraid of it, but I was certain you must know how much I thought of you, and if you cared for me you wouldn't marry another man. If you didn't—well, it would have most killed me to give you up; but I'd have done it sooner than marry you, Huldah."

"But suppose I had cared for you, and then changed after you went away?" she persisted.

"You couldn't if you cared as I did," he answered, and his voice shook a little as he said it.

"I always did care for you, Steve," Huldah said, "but I never knew how much till you went away. And I found out I didn't really know then until I thought you was going to die. Then I knew. You might have written to me, anyway."

Her tone was lovingly reproachful as she said this, when at last Steve bade her good-night.

"I started to several times," he replied; "but somehow I was afraid to write. I didn't know how you'd take it," and then Huldah's laugh rang out blithely as of old.

"Well, Steve Weston!" she cried. "If you don't heat all! Hadn't you better marry somebody you ain't so afraid of?"

"Oh, you needn't think I'm ever going to be afraid of you again," he answered, a new, self-confident ring in his voice.

She looked up at him, her eyes shining with pride and tenderness.

"I don't want you ever should be, Steve," she said.

For several years I have been afflicted with Asthma, and Jayne's Expectorant is the only medicine that has ever given me any relief.—LUKE VANAMAN, Rockwell, Tex., Nov. 4, 1895.

If bilious, take Jayne's Painless Sanative Pills.

WAITING ON GROWTH.

Ahle, energetic and conscientious fathers often force a tragic element into the lives of their children by refusing to recognize the necessity of waiting on growth. Such fathers are impatient of indecision and uncertainty; they expect their children to know what they want to do and to set about doing it. Any delay or vacillation of choice they regard as betraying intellectual or moral infirmity, and they drive and threaten at the critical hour when faith, patience and affection are specially needed. For the great question of life-work is not to be settled off-hand with some boys and girls; and these not of the dull and frivolous, but of the earnest and gifted kind. It often happens in the case of a boy of genius that the divinely appointed way in which he is to walk is slow in discovering itself; the boy must wait on his own development; and there is no experience more solitary and disheartening. Such a boy needs the most affectionate and trustful atmosphere, and he often gets reproaches and coldness. His inability to take the plain path, which his fellows are taking with such courage and promise of success, is interpreted as indicating lack of force, when, as a matter of fact, it is often superabundance of force not yet fully understood and mastered which holds him back. Nothing is sadder than the misunderstanding of a child at a critical moment by a father whose only desire is for the true success of his children, but who has not learned to wait on growth.—The Outlook.

BUSINESS MAN'S TALK TO A FARMER.

"No," said the hardware man to the farmer, as he tied up the package of nails in the paper, "as you say, people talk about the low price of what they sell, and don't say a word about the low price of what they buy. Take those nails, now. What do you suppose those nails would cost you ten years ago? Just about six cents a pound, and now you can take the lot of better goods at three cents, and the extra wrapper thrown in. That's not much, you say. Not so much on a little lot of nails, perhaps, but ten cents isn't much on the bushel of potatoes you brought in just now, and that's all the difference in price from ten years ago, and yet you grumble at the low price. It is not the pound of nails that hurts me. Everything in my store has gone down the same way. Your wheat and hay and chickens and butter and eggs bring you substantially the same prices they did ten years ago. You farmers forget that you have things to buy as well as things to sell. Want to buy a plow this year? There's a dandy for twelve dollars. Ten years ago I'd have asked sixteen dollars for it. There's four dollars saved to you at one clip. There's a better planter than the one I sold you ten years ago for sixty dollars—a whole lot better. Take it along for forty dollars. Remember that hinder you bought of me ten years ago for one hundred and eighty-nine dollars? Must be worn out, eh? I'll sell you a fifty per cent better one today and throw off the eighty-nine dollars. You farmers don't know when you are well off."—Superior (Neb.) Journal.

BREAKING MONTE CARLO.

Those who have a passion for gambling and have found it unprofitable—a class nearly as numerous as those who gamble at all—might well consider the recent announcement that a dividend of \$4,000,000 for last year has been declared by the stock company running the gaming-tables at Monte Carlo. That amount, says the St. Louis "Globe-Democrat," is the interest on \$100,000,000, and represents an extraordinary profit. There are about four hundred thousand visitors a year at Monte Carlo, and as, in addition to the dividend named, they pay the expenses of the gambling resort, with its thousand attaches, they will not be disposed to deny that gambling is a highly expensive amusement. Though there is a tradition that somebody occasionally breaks the bank at Monte Carlo, its dividends are never seriously affected.

As the games at Monte Carlo appear to be what is called square, even those familiar with them are at a loss to account for the enormous profits. The chances in the play seem to be almost evenly balanced, yet the millions gravitate rapidly to the side of the bank.

If the mere betting on red and black, which is prevalent at Monte Carlo, is so profitable to the bank many other forms of gambling are far worse. It is needless to name them. The visitors to Monte Carlo could make at least \$5,000,000 a year by not going there.—Chicago Tribune.

ARE you interested in knowing where high-grade sugar-making supplies can be had at lowest prices? If so, you should write to J. A. Field Mfg. Co., St. Louis, Mo., for their catalogue of Sugar-cane Mills, Evaporators, etc. Special advantages if you mention this paper when you write.

Our new book, "Samantha Among the Brethren," from the pen of Josiah Allen's Wife, is highly amusing—one of her best. See page 18 for particulars.

AN EGG-SHELL STEAM-ENGINE.

The egg-shell steam-engine is easily made. Blow two fresh eggs by making a small hole in the big end and carefully sucking out the contents. With very fine wire put each into a harness or cage by which it may be hung securely in a horizontal position. In the same manner firmly suspend a thimble from each egg so that it will hang directly below when the egg is suspended.

Next take a bottle-cork, into the bottom of which a pin is stuck, firmly fasten the prongs of two forks into it at exactly opposite sides, and poise the whole on the head of the pin, which should rest on a well-worn copper laid on the top of a sauce or wine bottle. If this mechanism is carefully constructed, it will freely and evenly revolve around the bottle.

It now becomes necessary to half fill each egg-shell with water. To do this heat them over a lamp, and then suddenly plunge them into cold water; enough will penetrate to the interior.

Now carefully hang a shell from each fork-handle, and place in each of the thimbles a wad of cotton-wool saturated in alcohol. Insure a perfect balance of the whole by placing a few fine shot in one or the other thimble if need be.

All is now ready for getting up steam. Touch a match to the cotton wadding in the thimbles, and in a few minutes the water in the egg will boil, and steam will begin to issue from the holes. Of course, the egg-shells are hung so as to face in opposite directions.

When the steam begins to "hiss" gently, set the whirling in motion away from the jet of steam, and then the force of the escaping steam will keep up the movement, slowly at first, but soon at quite a rapid rate of revolution.

If in place of forks in a cork a carefully balanced piece of white pine wood, poised on a blunt needle, and a polished and oiled copper be substituted, the smoothness and force of action will increase.

Goose eggs, of course, will afford larger boilers, and as a consequence will keep the machine in operation longer.—Pearson's Weekly.

GRANT'S SENSE OF FAIRNESS.

"I know of no instance that demonstrated the genuine manhood of General Grant as well as a little occurrence I witnessed at the St. Louis fair-grounds during the great soldier's second term as president," said J. N. Vanmeter, of Kentucky, at the Planters'. "The general was not only a great lover of horses, but was also one of the best judges of horse-flesh in the country. He had entered two of the finest geldings in the competition for prizes at the fair, and had quit the cares of his office long enough to come out here and attend the show. I had a number of horses in the same ring, as did many of the big breeders from all parts of the country. I was sitting by General Grant when all the entries were lined up for inspection, and he asked me what animal I thought would get the first prize. I named one belonging to an Illinois breeder, and the president unhesitatingly indorsed my judgment. He confessed that his own horses were outclassed, and stood no show whatever for any of the prizes. I made the same confession as to my horses. Everybody around us agreed that we were right, and that the Illinois man's horse would be awarded the blue ribbon by the judges without dispute.

"Imagine the astonishment of us all, then, when the judges tied the blue ribbon on one of General Grant's horses. The general had the inevitable black cigar between his teeth, and was chewing away at it. When he saw what the judges had done, he seized the cigar in his right hand, hurled it away from him as if it had burned his tongue, and, with his face blazing with indignation, he blurted:

"That's a blanked outrage, and the directors of the fair association ought not to submit to it. My horse is not entitled to any award, and the foolish men who have declared to the contrary are unfit to sit in judgment in any sort of competition. Their action is an insult to me."

"The president fumed around in this way quite awhile, and then in disgust left the fair-grounds. When this criticism reached the ears of the directors there was an effort to undo the clumsy and embarrassing piece of work, but, of course, this would have brought unnecessary reproach on the association."—St. Louis Republic.

Enameline

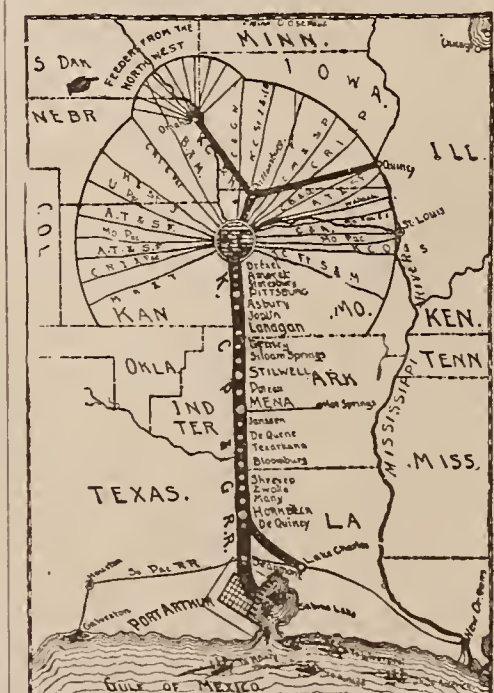
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THE CALF PATH.

One day through the primeval wood
A calf walked home, as good calves should;
But made a trail all bent askew,
A crooked trail, as all calves do.
Since then two hundred years have fled,
And, I infer, the calf is dead.
But still he left behind his trail.
And thereby hangs a mortal tale.
The trail was taken up next day
By a lone dog that passed that way,
And then a wise bell-wether sheep
Pursued the trail o'er vale and steep,
And drew the flock behind him, too,
As good bell-wethers always do.
And from that day, o'er hill and glade,
Through those old woods a path was made.
And many men wound in and out,
And dodged and turned and bent about,
And uttered words of righteous wrath,
Because 'twas such a crooked path;
But still they followed—do not laugh—
The first immigration of that calf,
And through this winding woodway
stalked
Because he wobbled when he walked.
This forest path became a lane,
That bent and turned and turned again;
This crooked lane became a road,
Where many a poor horse, with his load,
Toiled on beneath the burning sun,
And traveled some three miles in one.
And thus a century and a half
They trod the footsteps of that calf.
The years passed on in swift fleet,
The road became a village street,
And this, before the men were aware,
A city's crowded thoroughfare,
And soon the central street was this
Of a renowned metropolis.
And men two centuries and a half
Trod in the footsteps of that calf;
Each day a hundred thousand ront
Followed the zigzag calf about;
And o'er his crooked journey went
The traffic of a continent.
A hundred thousand men were led
By one calf near three centuries dead.
—Fact and Fiction.

HOW HE HAPPENED TO SAY IT.

Every man in the United States is supposed to know what the "governor of North Carolina said to the governor of South Carolina," but perhaps some do not know when and under what circumstances the famous remark was made.

Nearly a century ago a man prominent in political affairs in North Carolina moved across the border, and settled in South Carolina. He had been there only a short time when he committed some small crime, for which he was indicted. To escape arrest he returned to his old home in North Carolina. In due course of time the governor of South Carolina issued his requisition on the governor of North Carolina for the fugitive criminal.

The fugitive had rich and influential friends in his native state, and they interceded with the governor until he refused to grant the requisition. A long official correspondence followed. Prominent men in South Carolina told the governor that he had not been treated with proper official courtesy by the governor of North Carolina. The result was that the South Carolina governor, accompanied by a large party of friends and advisers, journeyed by stage to Raleigh for a conference with the governor about the matter of giving up the criminal. The governor of North Carolina, with a large party of distinguished friends, met the governor of South Carolina and his party several miles from town, and escorted them to the governor's mansion with all the ceremony due such distinguished visitors. Before the object of his visit was stated the entire assemblage sat down to an elaborate dinner. After dinner wine was served, and after wine came brandy—the applejack for which the old North state is famous.

After many rounds of drinks the decanters and glasses were removed, and the governor of South Carolina stated the object of his visit. He demanded the surrender of the fugitive criminal. The governor of North Carolina refused. Then followed a long and heated discussion, in which the attorney-generals of the two states took an active part. Finally the governor of South Carolina grew angry, and rising to his feet, said:

"Sir, you have refused my just demand and offended the dignity of my office and my state. Unless you at once surrender the prisoner, I will return to my capital, call out the militia of the state, and returning with my army I will take the fugitive by force of arms. Governor, what do you say?"

All eyes were turned on the governor of North Carolina, and his answer was awaited with breathless interest. The governor rose slowly to his feet, and beckoned to a servant who stood some distance away. His beckoning was firm and dignified, as became his position. He was slow about answering, and again the governor of South Carolina demanded:

"What do you say?"

"I say, governor, that it's a long time between drinks."

The reply restored good humor. Decan-

ters and glasses were brought out again, and while the visitors remained if any one attempted to refer to the diplomatic object of the visit, he was cut short by the remark that it was a long time between drinks. When the visiting governor was ready to return home, he was escorted to the state line by the governor of North Carolina, and they parted the best of friends.

The fugitive was never surrendered.—Florida Times-Union.

GOPHERS DESTROY A FINE CANAL.

Gophers have destroyed a \$400,000 canal at Oklahoma City. The recent filling up of the canal where it passes through the southern part of the town is the end of what once promised to be the most remunerative enterprise in Oklahoma.

Public-spirited capitalists believed that the waters of the rapidly flowing North Canadian river could be used to operate all the mills that could be placed on its banks at Oklahoma City. Engineers were employed to make a survey, and it was said that a canal five miles long could be made to carry the water that ran a distance of twenty miles by the sinuous course of the river. The fall was nearly thirty feet, enough, it was believed, to develop two thousand horsepower.

More than \$400,000 were expended in constructing the canal. It was diked part of the way, and the river was crossed twice. The canal was twenty-five feet wide and four feet deep. Its completion was an occasion of importance in Oklahoma City. Four inches of water were let in the head-gate and the electric-light plant and a large flouring-mill were run as if by magic.

An unsuspected enemy, small in size, but prodigious in industry, soon overwhelmed the enterprise in disaster. The banks of the canal were of porous, sandy soil. Gophers attacked the dike. A hole no larger than a man's wrist, burrowed by these animals, widened into a crevice in half an hour, and the water easily swept away the sandy dikes. The repairs were constant and costly. The promoters grew discouraged. The money panic swept over the country, and the canal was a wreck. Its flood-gates are gone, and the masonry is a pile of debris. Farmers are now plowing up the right of way, and the canal is gone.—Chicago Tribune.

TRANS-SAHARAN RAILROAD PROJECT.

While still in the air, it is quite certain that something will come of the recent agitation in France and Algeria in favor of a trans-Saharan railroad as a strategic, political and commercial necessity. We know that the French have made Algeria one of the best mapped parts of the world, that they have built 1,700 miles of railroad in the colony, and that Algeria is looking across the desert to the rich central and western Soudan as a source of trade, capable of enormous expansion, which may be drawn to her marts. The outline of the plan is to build a narrow-gauge road from southern Algeria through a series of oases to Timbuctoo, and to connect this point by rail with Senegambia on the southwest, and on the east with the fertile regions of the central Soudan as far as Lake Tchad. Three projects for this railroad have been studied by order of the French government. These proposed routes, with the project for a shorter line, having an ocean terminus at Cape Nun, are indicated on a map which has been published. The Russians have proved in central Asia that desert railroad building is practicable; and while the Saharan railroad project has not passed the stage of inquiry and discussion, there are indications that the work of carrying it into effect will not be long delayed. It will be first required, however, to establish proper influence over desert tribes like the Tuaregs, who seem at last on the verge of more hopeful and pleasant relations with the white race. The proposed line from Ain Sefra is in greatest favor, and is likely to prove most practicable.—Engineering Magazine.

SOMETHING FOR THE FARMER.

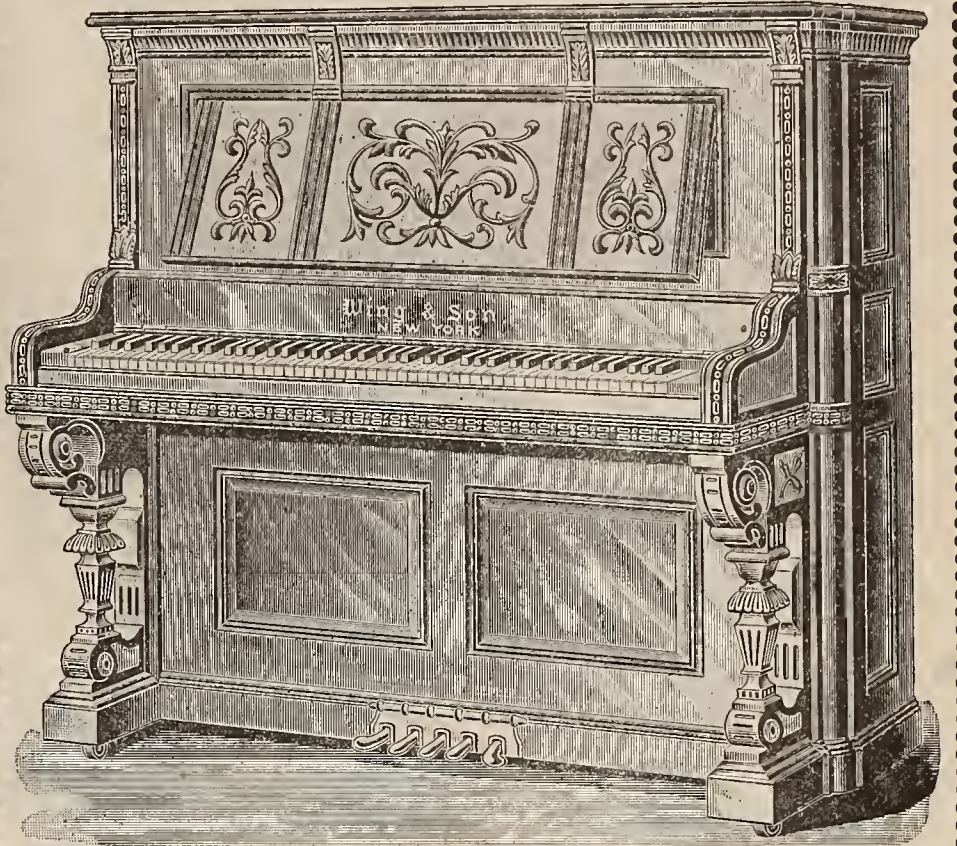
If there was ever invented a really labor-saving machine for use on the farm, the Small Threshing Machine, manufactured by the Belle City Manufacturing Co., Racine, Wis., in its adaptation to special farm work, certainly fills the bill. Every farmer possessing a Columbia Thresher can do his own threshing quickly and with the utmost economy. The manufacturers make no extravagant claims; they know what it will accomplish and its value to every farmer who uses it. It has a great capacity and can be run by light power. This firm also manufactures a line of Ensilage Cutters, for both hand or power use, that have won especial praise; also a full line of Sweep and Tread Powers. Their implements are strongly recommended to all practical farmers as the best that scientific skill can produce. See their advertisement in this paper, and write them for Illustrated Catalog, and mention FARM AND FIRESIDE.

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OUR NATION'S WEALTH IN GOLD DOLLARS.

The wealthiest nation of the world is the United States. The census of 1890 shows the true valuation, or fair selling price, of the real and personal property of the country to be \$65,037,091,197. It is an increase of over forty-nine per cent on the valuation of the previous decade, and is about six times the value of the money of the entire world. The mind cannot grasp the meaning of such figures without graphic illustration. This amount in gold dollars would load 123,570 carts, each carrying a ton. If 2,000 gold dollars were piled one on the other they would form a stack three feet high. Make similar piles close together until a wall of gold one mile long and worth \$230,400,000 is formed. Increase this wall to twenty-eight and a quarter miles and the amount would represent our national wealth. Placed side by side the coins would form a carpet of gold covering five square miles.—William George Jordan, in Ladies' Home Journal.

HOW A MAN AND WIFE SECURED POLITICAL JOBS.

Ex-Governor Thatcher, of Colorado, tells this: "I had been in charge of my office but a few days when I received one day a large bear that had been recently killed, accompanied by a note telling me that it was 'mighty fine b'ar meat.' This note did not give the name of the giver. A few days later

a dozen wild turkeys arrived at the executive mansion. The next gift was a large box of fine mountain trout, along with some fresh berries. By this time I was a little curious, but had no way of learning whom they came from. One day I received an extra large box. There was a large cake, some pies, bread, jams and jelly, with small pieces of different meats finely cooked. This time the note informed me the unknown would call on me in a few days. I was anxious to see the person, and when one Saturday a long-haired man from the mountains came in I was somewhat surprised. 'Well, governor, what do you think of my ability as a hunter, and of my wife as a cook?' asked the stranger. Without any more talk he said he wanted the job of furnishing my household with fresh meats, and his wife wanted the position of cook. As they had shown their abilities, I gave them the positions at once. He never failed to keep a good supply of meats on hand, and his wife furnished good home cooking. If all the office-seekers were like that man, a government official's life would be a happy one."—Omaha Bee.

IS PUBLIC OPINION CHANGING?

However it may cut across old theories or disturb party lines, the swerving around to high-tariff notions by the masses appears to be a fact, grounded in the industrial conditions which now environ the country.—Baltimore Herald.

Our Household.

SEVEN AGES OF MAN.

At first the mewling infant,
In a baby-carriage neat,
That is trundled by a nurse-girl
As she flirts along the street.

And then the whining school-boy
Who is full of won'ts and can'ts,
And therefore wears a sheepskin
And seven pairs of pants.

And then the mournful lover,
Who is always short of brains,
And comes to serenade her,
And gets floured for his pains.

Next comes the gallant soldier,
And I hasten to remind him
There are other tunes to whistle
Than the girl he left behind him.

And then the Justice, humming
Nature's done so much for me,
That I sign myself "yours truly,"
With a very large J. P.

To the lean and slippered pantaloon
The sixth age swiftly flies,
And the family grieves to hear him
Tell the most infernal lies

About the men he killed in battle,
And the weather he passed through,
Of hot summers and cold winters,
And the b'ars and deer he slew.

Drop the curtain to slow music
On the final episode,
If I didn't nurse George Washington
I hope I may be blown!

HOME TOPICS.

APPLE SAUCE.—Just the very best apple sauce is made by steaming the apples. Prepare the apples the same as for stewing, put them into the steamer and let them steam until soft; then mash them, and beat until fine and smooth. Sweeten to taste, and you will say it is far superior to stewed apples. I always use my wire potato-masher with which to mash and beat the apple sauce.

CITRON AND QUINCE PRESERVES.—The flavor of quinces is so strong that preserves made half citron are of delicious flavor. Pare and cut the citron into pieces about the size of the quince pieces; boil them in weak salt-water about thirty minutes, then drain them; put on fresh water, and boil them until a broom-splint will pierce them. Pare the quinces, cut them into halves and take out the cores; boil them in clear water until they begin to be tender. Skim them out, and add to the water three fourths of a pound of white sugar to every pound of fruit. As soon as the syrup has boiled and been skimmed, put in the quince and citron in alternate layers. Let the fruit boil in the syrup until the pieces look clear, then skim it out and put it into jars, filling them three fourths full. Let the juice boil until it drops "long" from the spoon, then fill up the jars with it and seal.

NIGHT-CLOTHES.—Every one should have garments made expressly for night wear, and on retiring remove every article worn during the day. If wool is agreeable, it is the best material for night-clothes, but there are many people who cannot wear wool next to the body. The next best material is outing-cloth. The soft downy surface of this cloth is pleasant



to feel, and nightgowns made of it are warmer than muslin. A short wool sack to be worn over the nightgown is useful for children who are apt to throw their arms out of bed, and also for nursing mothers. A very good nightgown for little children who will not keep the

clothes over them is made like the one illustrated. It is cut like any other nightgown, large and roomy; but the back is cut ten inches longer than the front, and fastened up on the front with buttons and buttonholes. With this gown on the child can kick all it wishes to, but the little feet and legs will remain covered.

MAIDA McL.

CAPES.

The cool days of early fall should not catch you without some kind of a shoulder wrap of warmth. A very pretty cape for an elderly lady is combined of heavy black satin, moire or dull black silk, or drap-d'ete. This can be trimmed to suit the wearer's taste, with lace and passementerie. For ordinary wear one of rough cloth lined with silk is very serviceable.

For a young girl or little child a lightweight cloth, lined with silk and interlined with Canton flannel, makes a comfortable early fall wrap.

HOUSE JACKETS.

No one who has used these comfortable articles of dress would be without one or two of them in her wardrobe. For early fall wear with some of the summer skirts the most attractive are of bright cashmeres, red or pale blue. Trimmed elab-

earthly sphere than that of home-making, homekeeping and housekeeping?

To be sure there are circumstances that make housekeeping an impossibility in many instances. But there are discontented wives and mothers where there seems so little, or perhaps no cause whatever for the restlessness. Servants are given possession of the homes while the rightful mistresses thereof are seeking the applause and notice of the world, and are engaged in the public services before them, and homes—their own royalties and principalities—are of but a secondary consideration at the most. It is all these things that have given rise to the many disparaging things said of women who rebel at housekeeping, until women as a class are coming to be looked upon as a discontented element, and they are accused of bitterly complaining at the situation that keeps them housewives and mothers.

But we know of women, too, whose ambitions are bounded by the home and

one who cultivates this one of the virtues adds to her happiness every day.

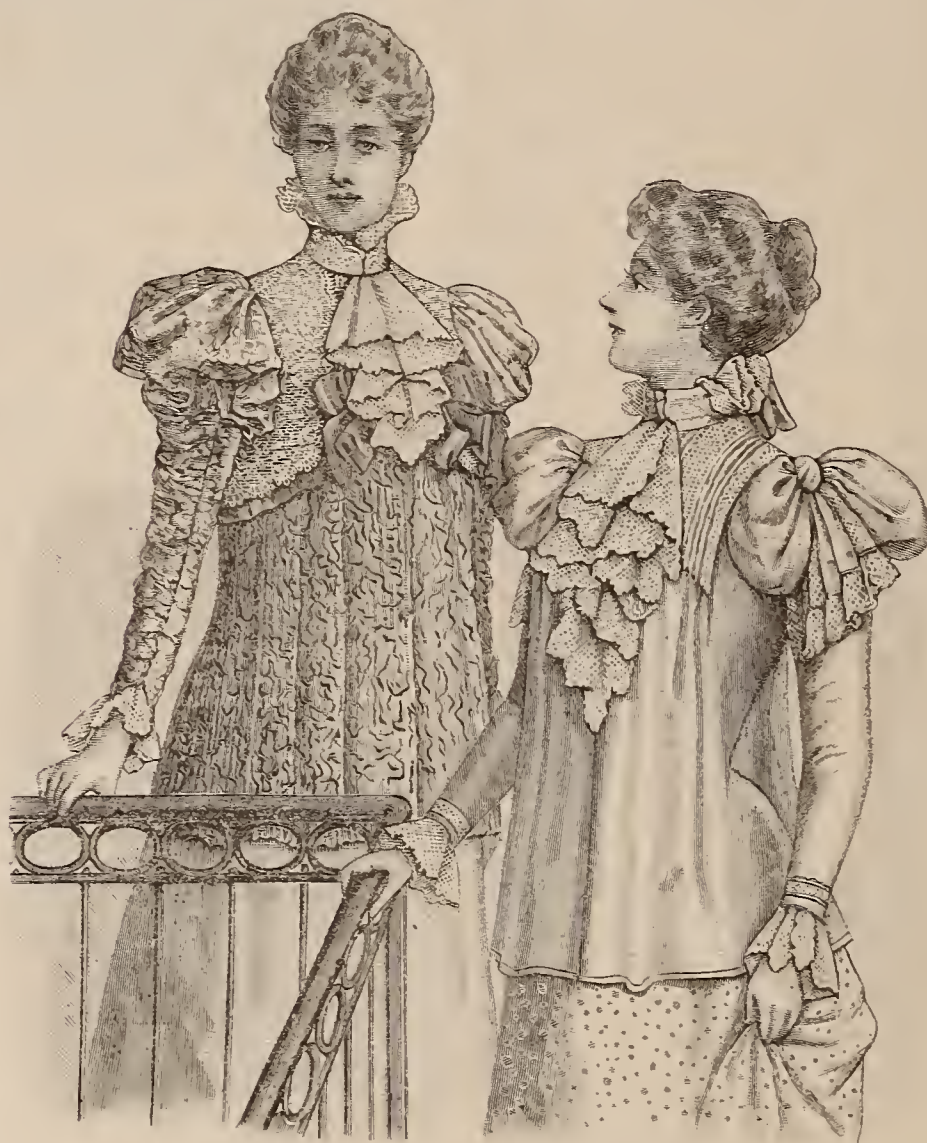
Housework is in many ways hard and monotonous, and there are duties that are exacting and tedious. But there are any



number of pleasant features connected with it also; and performed as a labor of love, it is glorified and beautified in the doing. Neither is it more laborious, exacting or monotonous than the work of husbands that they must do over and over again with much exactness and worry and fret for the support of their households. But we believe love makes their burdens lighter and their work to assume a phase that is much less monotonous than it could be if done continually under an internal protest, and under a feeling of slavish environment and bondage. Love makes all tasks and situations lighter and pleasanter. Or if it does not, it is the one pitifully lacking element that could be made to transform the home of discontent into one of happy content.

One writer asserts that the only unanswerable excuse for woman's entrance into active public life of any kind is need. She further claims that this need is constantly growing greater as marriages become continually more rare, and that this state of affairs is to be traced to the taking of positions from men by discontented women who would not be satisfied with home-keeping, but must be accepted as wage-earners out in the world of business.

This writer has left us in somewhat a maze of wonderment concerning all this. We recognize the widespread discontent among women confined to housework and the general work of the average housewife, and we wonder that women who have perfect health can be content to place the reins of kitchen and general household government into incompetent hands, while they turn their hands to painting and embroidery, or give them up to listless idleness. For to me housekeeping is the embodiment of pleasant undertakings, and the home vastly more inviting than the business world, that leads or takes one out from home, and there can be no more graceful or beneficent presider than the presiding queen of the household realm. It is at home that a woman should be at her best, and usually is. We believe her more often content to remain there than at present conceded by many who take up the pen against woman and her frailties, though ready to admit that among housewives there are many who look upon housework with disdain and a feeling of



orately with the lace and ribbon they demand to give them a dressy appearance, and to keep them from looking too much like a negligee garment, they can be worn all times of the day.

A plainer one for breakfast wear can be fashioned of tennis-flannel, and give the wearer a very attractive look early in the day. Some use wash-silks and have the front accordion-plaited. A fitted lining is always best for the back, unless the entire sack is loose.

DISCONTENTED HOUSEWIVES.

It is said that with women of the present day housekeeping is fast falling into disrepute, and to too great an extent disappearing among the lost arts of civilization. Such admission as this we are not ready to concede, though we do know that among many housewives there is a very great tendency to discontent with their lot, and a feeling of being obliged to endure a succession of environments that preclude the possibility of reaching out into the imagined "higher sphere" for which they have come, or are coming to believe themselves fitted. But can there be a higher

the home inmates. Their homes are pleasant places to enter, and these women are pleasant associates and companions. The outside world reaches them only through the press, and one hears no wail of discontent, but of many things that show the ambition and zeal of the presiding genius enthroned as "household queen."

Woman's ambition to take her place in the world of business and finance is worthy and right, but to throw down the reins of domesticity and neglect the home, when she has essayed to take her place as wife and housewife and companion to the man of her choice, it is wrong to let discontent usurp the place of the happiness and perfect content she felt when beginning her new life as helpmate. There is neither gain nor happiness in it; and it is not only herself that must suffer the consequences of her restlessness, but the entire household.

Discontent is a vice that is more than six thousand years old, we are told. And there is no hope but that will be known at the end of time. It is a part of innate human nature. But content can be cultivated and fostered to a great degree, and



superiority above the occupation that they choose to call homely and a thankless task. This fever of unrest has been contagious, and in many ways a detrimental

factor, introduced by hand-free women of ambition and possessing business tact and ability. It is natural and not wrong that women should aspire to moneyed independence, and in so many instances it is through necessity, and necessity alone, that women have entered the channels of labor where pay might be assured, and more women are wage-workers from necessity to-day than from choice.

Woman is naturally domestic. Husband, children and home are the principles of her province, and she loves the protection and the seclusion of home better than she does business worries and perplexities. Ask her collectively, and you will find it so. If she may add to her wardrobe and household stores through money-bringing efforts conducted at home, her attempt and success is very pardonable, and, we feel, a very praiseworthy one. And housewives thus doubly employed, if physically fitted to the endurance, are the happiest of women to be found, and they are the makers and keepers of the happiest and the most homelike of homes. They should be commended, not condemned.

ELLA HOUGHTON.

SKIRT-CUTTING.

Before giving directions for the cutting of dress-skirts we wish to say that for all home dressmaking the patterns put out by various reliable firms are preferable to any of the drafting or tailor systems we have examined. Various changes in the form of the different parts of patterns are constantly being made, and a dress must be of the latest cut if one is to be stylishly attired. As a supplement to the use of patterns the knowledge of a good tailor system is very desirable, but not essential.

Use good, firm material for skirt-linings—cambric, percaline or taffeta. We use a good quality of cambric, generally, as it is least expensive and gives very good results. Of course, haircloth is to be preferred for the stiffening of the bottom of the skirt, but as it is quite expensive, we usually use linen canvas. Press linings and stiffenings before cutting if not perfectly smooth.

Cut each section of the lining separately on the run of the goods indicated by the perforations and notches of the pattern, following directions carefully. Use the bottom of each section of the lining as a pattern for cutting the stiffening, and be sure that the grain of both stiffening and lining run in the same direction. Skirts are being stiffened only at the bottom now, the stiffening facing the skirt only from six to ten inches at the bottom. The different sections of stiffening should have the edges marked, with the marks on the corresponding edges of the pattern, to indicate their proper joining; the stiffening being seamed separately when canvas is used. Notch the top. When haircloth is used, each section should be stitched at the top to the corresponding section of lining, and should interline the skirt at the bottom when put together.

Look at your dress material. See if there is a nap, which brushed one way is raised or roughened, but looks smooth when brushed the other way. The nap of a skirt should look smooth when brushed downward if the material is cloth, the reverse if the material is velvet. Cut your

dress, but such a dress can be worn in the rain without fear of spotting or shrinking.

Lay the front section of the lining on material, being sure that the warp of the material runs true with the warp of the lining. Baste down the center, then around the section about two inches from the edge, with rather long stitches, being careful that the lining lies smoothly on the material. Follow the edge of the lining carefully in cutting. Cut the other sections of the skirt in a like manner, omitting bastings down the center of all but the middle-back gore, if there is one. Some skirts have a seam in the middle of

such a thing as a tie-back is not to be suggested. Of course, a person needs to have natural aptitude in cutting to be able to adapt a pattern (even of a skirt) to all figures. Patterns are cut for perfect forms, but a very little ingenuity adapts them to even very imperfect ones, and there is no reason why any woman should not have neatly hanging skirts.

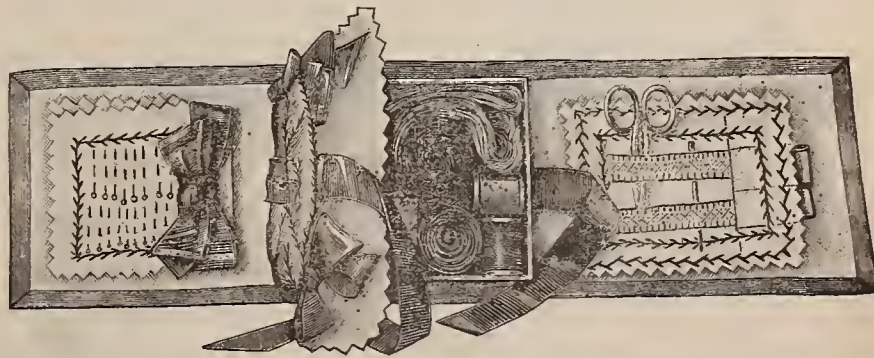
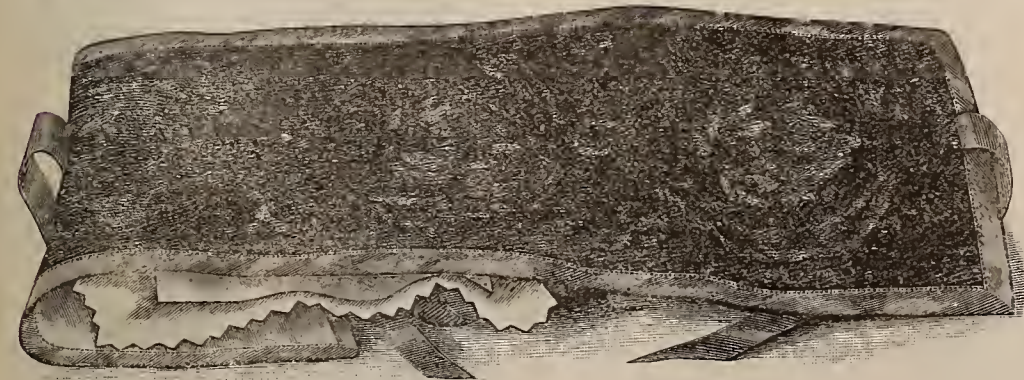
LUCY C.

A HANDY NEEDLE-CASE.

The outside of this can be made of chamois, with the design worked in wash-silk; the inner part of satin, which should

ter only. Two crisp lettuce-leaves are then patted down upon the buttered biscuit, and trimmed to the same size, leaving a hint of green to show all around the edges. A layer of mayonnaise dressing is then spread upon the lettuce, and on one is afterward spread a thin layer of finely minced ham or chicken; after which the two halves are laid together, pressing lightly. They should be served soon—before the lettuce wilts or biscuits have time to become heavy.

FRUIT SANDWICHES.—These are very nice, and may be used as a part of the regular course for a luncheon, tea or picnic, or



material so that the nap all runs down if cloth, or up if velvet, is a good general rule for both waist and skirt.

If you have any regard for style or even a genteel appearance, don't try to save goods by disregarding this rule.

If your dress material spots, it should be carefully sponged all over and pressed with a warm iron on the wrong side, with an intervening thickness of thin muslin. Test a piece of your material by dropping water upon it and drying to see if it spots; also test the effect of sponging and pressing, as some colors are affected by the heat of the iron. It is considerable trouble to sponge all the material for a

the back; leave bastings in until skirt is finished and pressed. For the band cut two strips of the desired width and length, one of the dress material for the outside of the band, the other of the lining as a facing for the band. Allow for lapping the band over the placket-fly. Cut two pieces for placket-fly, one of the material, the other for facing the fly, of the lining; also a strip of material for facing the other side of the placket. Cut into half-inch-wide strips all the selvages of the scraps of lining. These strips are to be sewn with the bias seams to prevent sagging at the seams. If a stay-strip is to be cut, it is wise to make it of elastic, though

lap over onto the right side to simulate a hem. In the middle of the inside is attached a shallow box, covered with the satin, to hold spools and tape. The flannel leaves on either side, for needles, scissors and bodkin, explain themselves.

TOOTHsome SANDWICHES.

One of the newest and daintiest sandwiches is made from tiny soda-biscuit not over three inches in diameter, and when baked, about half an inch in thickness. They must be quite fresh, though perfectly cold. Split each in two with a sharp knife, and butter—just a suspicion of but-

as a dessert, served with coffee or with lemonade. The bread should be very fresh, cut as thinly as possible and well spread with the sweetest and best of freshly made butter.

Large strawberries cut in slices, lightly crushed raspberries, or sliced peaches or sliced bananas and oranges together may be used. The fruit should be lightly pressed into the butter, liberally sprinkled with sugar and served within a short time. Slices of sponge-cake, spread with whipped cream, then with sweetened fruits, and served at once, make a nice dessert for a garden party.

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Our Household.

SUMMER SKETCHING.

NO one should let a summer pass without recording a few of its scenes and events in sketches. You may object that you have not been taught sketching. Some instruction is a great advantage, but experiments will serve the office of teacher.

Sketching from nature is not an exact science. A little picture with many defects may afford enjoyment. If you have always lived in the same home, doubtless some member of the family has wandered afar, and he will value a little sketch of the barn, the old-fashioned well, the garden gate or the old side porch. The camera with its magic button may reproduce scenes by the dozen, but they will lack the interest of one little free-hand sketch.

Some persons have a natural sense of perspective and although they may not be able to explain the rules, they observe them. Perspective is that branch of art whereby on a plain surface objects are made to appear at proper distances. There are two kinds of perspective, aerial and linear. The two words explain themselves. Aerial perspective results from the indistinctness given to objects by the density of the atmosphere which intervenes between the spectator and the scene observed. This gives that charming blue hazy effect to distant forests, and causes the line of the horizon to be soft. This is one of the chief beauties in nature and in pictures.

Linear perspective relates to lines: if you look down a straight street it seems

sketches of the various scenes which were the background to various chapters of your life.

Sketching material may be pen and ink on bristol-board, pencil and paper, or water-color paints, paper and brushes.

K. K.

FRUIT DESSERTS—PEARS AND PLUMS.

1. Fresh Pears and Plums.
2. Pear Pie No. 1.
3. Pear Pie No. 2.
4. Baked Pears.
5. Iced Pears.
6. Plum Pudding.
7. Plum Pie.
8. Plum Cake.

In very few ways can these two kinds of fruit be cooked, but they are scarcely less delicious when fresh than other fruits. Pears when passed at the table should be served with a dainty fruit-knife, particularly if the skin be at all tough, as is the case with so many otherwise very fine specimens. They should look tempting and be tempting—fresh and compact, with no soft spots, and yet at the same time should be fully ripe. An unripe pear is certainly not very digestible.

Plums should also be fully ripe, but should not be too much so. A plum that has grown so ripe that it has become soft is not at all appetizing, spoiling your appetite for other good things to come.

The purple, red and white plums, when perfectly ripe, make a very pretty dish when passed as fresh fruit, as do the delicious yellow-cheeked Bartlett pears, the rosy-faced Flemish Beauties, and some of the good old pears which grow in the old-



to be more narrow at a distance, till the sidewalks seem to meet. If you look down a row of trees which are really of the same height, they seem gradually to become shorter. Learn to notice these phenomena as you walk and ride about the country.

In sketching from nature, do not begin by including many objects in your picture. If you have too complex a scene you will grow tired of it and finish it carelessly. One clump of bushes, one corner of the house, one window with the flower-pots on the sill—some simple thing will be enough to claim your ability as a beginner.

If you are not settled in an ancestral homestead, but change your abode occasionally, it will be pleasant to retain

fashioned country gardens, and which are more to my liking than the more noted varieties.

PEAR PIE.—For variety's sake these recipes have been collected from different sources, even though this fruit is generally preferred uncooked. Line your pie-plate with crust; slice into it mellow Bartlett pears (of course others will do, but Bartletts are usually preferred) until the plate is "heaped." Mix one quarter cupful of sugar, the grated rind and juice of half a lemon, and one inch of candied ginger-root sliced thin; sprinkle part of this on the crust and the remainder among the sliced pears; cover with the second crust, and bake quickly.

No. 2 PEAR PIE, which is quite different

from the above, is just as palatable. In this case pears sound but not quite ripe are to be used. If they should happen to be large or thick-skinned, they must be pared. Put them into a deep covered pudding-dish, with half a cupful of water, two tablespoonfuls of molasses and two of brown sugar. Bake slowly until tender, and baste often with the syrup. Bake two crusts with cloth between. When ready to serve, slice about one pint of baked pears, add two or three tablespoonfuls of cream, cover with the other crust, and serve at once.

BAKED PEARS.—Put into a pan pears which have been washed, but which are unpared, add one or two teaspoonfuls of water, and then bake; sprinkle with sugar, and serve with their own syrup. Many pears which are not as nice as they might be originally, when baked as above turn out to be very good indeed.

ICED PEARS make a very pretty and dainty dish. The pears may either be iced whole or quartered, or even sliced. Take a few fine juicy ripe pears, pare and quarter them, or if very large they should be divided into eighths. They are now ready for the icing process. Dip them into well-beaten white of egg, and then dip them into powdered or confectionery sugar, and set away in a dry place to slightly harden; after which repeat the process of crystallizing, and continue to repeat it until you have the icing the desired thickness. Some place them for the final crystallization process in an oven that is cooling. After standing several hours to crystallize or harden, place in a refrigerator or other cool spot so that they can be thoroughly chilled before serving. When the fruit is iced whole, the skin should be removed, and then the crystallizing process performed as before.

PLUM PUDDING.—While this recipe requires plums indirectly, it does not require the fresh fruit. Still, I have selected it as being a very nice dessert. The ingredients required are one pound of suet finely chopped, one pound of flour, four eggs, one pint of milk, one pound of currants, one pound of raisins, with spice to taste. This should be boiled in a bag or form for three or four hours. If a bag is used (which is perhaps the most common way of cooking pudding of this sort) but a little room should be allowed for it to swell. Serve with hard or vanilla sauce.

PLUM PIE.—Cover your pie-pan with crust, and fill it with plums which have been stewed in a very little water, stoned, and sweetened to taste. Mix one rolled cracker with the fruit if it be very juicy, cover with the upper crust, bake quickly.

PLUM CAKE.—This is also a plum dessert which requires no fresh fruit. Cream one cupful of butter and three cupfuls of sugar, add one cupful of cream, five eggs, five cupfuls of flour, two teaspoonfuls of soda (the flour and soda should be sifted together) and one half pound of raisins. Dredge the raisins first, that is, dip them into flour, mix well, and bake.

The field for pear and plum desserts is rather a limited one, the different kinds of desserts being fewer in number than other fruits, such as apples, peaches, etc., still an attempt has been made to collect a few very desirable ones.

EMMA LOUISE HAUCK.

CHILDREN'S DRESSING.

A comfortable bicycle suit for a boy is a blouse of outing-flannel and blue serge knickers. As several blouses must be necessary, a color and quality that will wash well is desirable; those of light blue and white are the best.

Stockings made without feet, with a strap under the middle of the foot, can be pulled on over the other stocking. These come ready made in all the pretty golf patterns, and need not find their way into the wash so often.

IVORY SOAP

Divide a cake with a stout thread and you have two perfectly formed cakes of convenient size for the toilet

THE PROCTER & GAMBLE CO., CINTI.

A soft hat of cloth is best, as the wind is not so apt to carry it off.

The little girl's dress is entirely of sun-pleated material, even the hat; and if made of wool or silk, will last two seasons, one as a summer dress and with white guimpes as a house dress in winter. Small children should wear out their clothing while it fits them.

Children have too many clothes, and in this way there are always clothes to make over. A good plan is to have two dresses of the same material, so that later on they can be joined and made one good one.

L. L. C.

HAVE YOU ASTHMA OR HAY-FEVER?

Medical science at last reports a positive cure for Asthma and Hay-fever in the wonderful Kola Plant, a new botanical discovery found on the Congo River, West Africa. Its cures are really marvelous. Rev. J. L. Combs, of Martinsburg, W. Va., writes that it cured him of Asthma of thirty years' standing, and Hon. L. G. Clute, of Greeley, Iowa, testifies that for three years he had to sleep propped up in a chair in Hay-fever season, being unable to lie down night or day. The Kola Plant cured him at once. Mr. Alfred C. Lewis, editor of the *Farmer's Magazine*, was also cured when he could not lie down for fear of choking, being always worse in Hay-fever season. Others give similar testimony, proving it truly a wonderful remedy. If you suffer from Asthma or Hay-fever you should send your address to the Kola Importing Co., 1164 Broadway, New York, who to prove its power will send a Large Case by mail free to all who need it. All they ask in return is that when cured yourself you will tell your neighbors about it. It costs you nothing and you should surely try it.

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being a *separate* pattern for every single piece of the dress. All orders filled promptly.

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Satisfaction guaranteed or money refunded.

To get BUST and BREAST measure, put the tape measure ALL of the way around the body, over the dress close under the arms.

Special price of each pattern, 10 cents.

Postage one cent EXTRA on skirt, tea-gown and other heavy patterns.



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No. 7149.—LADIES' MATERNITY SKIRT. 11 cents. Sizes, 24, 28 and 30 inches waist.

Address FARM AND FIRESIDE, Springfield, Ohio.

Our Sunday Afternoon.

FAITH.

I cannot tell how the lilies
From their beds creep up so far;
I can only pluck them gently.
And think how fair they are.
I do not know how the planets
Swing out into space so free.
But I know that One controls them,
And that is enough for me.

I know not whence comes music
From the song-bird's swelling throat,
But I feel the heavenly sweetness
That dwells in every note.
I cannot read His purpose,
Nor solve each mystery,
But all that he sends is righteous,
And that is solace to me.

I know that the flowers must wither,
And the stars be dimmed some day;
The song will sink into silence,
And all things pass away.
But I also know of a Savior,
Whose face I shall sometime see;
He rules with a love eternal,
And that is enough for me.

THE SUN STANDING STILL.

There are people who have great difficulty about believing the statements contained in the Bible. There, for example, is the story of the sun standing still. Who can believe such an account as that? The standing still of the sun or the interruption of the revolution of the earth would throw everything into confusion. It is impossible. How could it be done? But years ago men said it was impossible to run a locomotive fifteen miles an hour; and if a train of cars ran at that speed it could not be stopped, and would smash everything all to pieces.

I can easily explain how the earth was made to stand still if some one will tell me how it is made to move, and how it ever got started. All the steam-power, horse-power, electric-power, and all other kinds of power which men know or see or can use, would never have started the world running; and when you come to think of hundreds of thousands and millions of worlds, suns and stars, started on their course, moving with a motion swifter than man has ever communicated to anything, and moving on steadily, irresistibly, age after age, century after century, without collision, interruption or variation, always on time: when any man will tell me how such a universe got started, and what keeps it going, I will be ready to tell him how it can be made to stand still.

When Stevenson built his locomotive a skeptical critic said, "She'll never start;" but when the steam was turned on and the engine was set in motion, he said, "She'll never stop." The trial trip was made, and the engine came back in safety; and then when the fact was established, the man undertook to investigate, and at the conclusion said, "Now I know all about her. She's got fire in her heart."

But no man has yet investigated the world to find the secret power that rules it and runs it. Men have found out how to start the locomotive and how to stop it. They have also found out what makes it go; but up to this time they have never found out how to start a world, or make it go, and of course they cannot tell how to stop one.

A man who could invent a steam-engine might be trusted to invent a brake to stop it, and a God who could make a world and run it for thousands of years could find means to slow down its motion a little if he desired to.—The Christian.

ABBA.

"Abba" is a Syriac form of the Hebrew word "father." It is really Aramaic. Then we have given to us the Greek equivalent, which is rendered "Father." This word "Abba" deserves very careful study. No slave, though born in the house, was allowed to use it toward his master. All he could call his father was "Adon," "Lord." To use the word "Abba," the little one must be a child—a legitimate child. It was a choice word, reserved only for their lips. It is a remarkable thing that all the way through the Old Testament you never find the saints of God addressing Jehovah as "Father." And this is in spite of the fact that he represented himself to them as their father. He called Israel his "first-born." He encouraged them, moreover, to call him "Father." Through the lips of Jeremiah he said: "Wilt thou not from this time cry unto me, my Father?" But

though God allowed them to call him Father, and encouraged them, we have no record that the Old Testament saints ever employed the word. It was not until the coming of the Lord Jesus that this filial spirit was known. You may read all the way through the Psalms, marvelous as they are for their deep devotion. High though David soared, he never touched the word "Father." He got nearest to it in Psalm 103, when he said: "Like as a father pitieth his children, so the Lord pitieth them that fear him." But he only declares the fact, he never addresses God as "Father." And all the way through the Old Testament, although you have the word over and over again, and the fact declared, you never find any Hebrew looking up to God and saying, "Father."—The Treasury.

DON'T HURRY.

Haste makes waste. If you have but five minutes to do a thing it may pay to take one minute to plan how it shall be done. Hurry and worry go together, and they often result from idleness and carelessness.

"You didn't run fast enough," said a bystander to an Irishman who came puffing into a railway station just after the train glided out.

"Yes, I did run fast enough," said Patrick, "but I did not start soon enough."

Dawdle in the morning causes hurry at night. The man who is up betimes, and gets an early start, does not need either to hurry or worry.

"Time enough" is always little enough; and the time lost in idleness and neglect is not to be made up in frantic haste. Says a judicious writer:

"We can spoil more work, do more damage to all concerned, and create more needless delay, by anxious, unseemly and precipitate haste than perhaps in any other way. Our powers of perception become dimmed, our spiritual discernment becomes less acute, our reason is more sure to be at fault, our memory refuses to fulfill her office, our tempers become unmanageable, our whole nature—physical, mental and moral—becomes incapacitated for the best quality of work. So much that we have so done would be so much better left undone, and still more will require to be done over again, that we will find that the old motto will repeat itself in our hurried experience, 'The more haste, the less speed.' So there is a profound truth in John Wesley's apparently singular statement, 'I have no time to be in a hurry;' and an older writer than Wesley, conscious of the self-poise of the trusting soul which rests upon a sure foundation, has said: 'Thus saith the Lord God, behold I lay in Zion for a foundation a stone, a tried stone, a precious corner-stone, a sure foundation: he that believeth shall not make haste.' Isa. xxviii. 16.—The Christian.

SACRIFICE.

Sacrifice has gone out of fashion among Christians to quite an alarming extent. The very meaning of the word is almost forgotten. To sacrifice is to give up some lawful self-gratification for the good of others. It is the voluntary subjection of one's self for the sake of others to some danger, loss or suffering which we could avoid if we would. It is the transfer of our talents, powers, influence and possessions from the altar of self to the altar of God and humanity. In other words, sacrifice is love made manifest. It is the revelation of love. Sacrifice is the language of love. Love without sacrifice is a fire without a flame, a tree without a leaf, a stalk without a flower.

Yes. Here is the key to sacrifice—none else but love. Here is the motive power that shall make sacrifice not only possible, but easy. Do you shrink from the cross? Do you stagger beneath its weight? Do you start at the dark shadow of past sorrow? Do you tremble at the footfall of each approaching one? Here is the remedy for it all. Get a baptism of divine love in your soul, and the hard shall become easy, the crooked straight, the mountains plains.

Then you will not wait for commands to compel you to voice the pent-up feelings of your inmost soul. Then you will not pause to reckon up the evils that may befall you. The divine compulsion of love will be upon you. The wings of sacrifice, too long folded, will expand of their own accord, and will bear you swiftly through all the world as an angel of mercy and a messenger of hope.—Commander Booth-Tucker, in the Golden Rule.

Fainting Spells and Dizziness Follow La Grippe.

WE HEAR LESS ABOUT THIS DISEASE THAN FORMERLY, BUT IT IS STILL VERY PREVALENT.

From the New Era, Greensburg, Ind.

A noteworthy instance of the fallibility of even the most skillful physicians is furnished in the case of Mrs. J. E. Smith, of Greensburg, Ind.

For four years Mrs. Smith was afflicted with a nervous affection that finally left her almost completely helpless and which the physician who first attended her said positively could not be cured. Subsequently, a number of physicians in this and other cities declared her case to be hopeless.

To-day in spite of the verdict of the doctors, and without their aid, Mrs. Smith is perfectly well. To a *New Era* reporter she told the story of her extraordinary recovery.

"Five years ago I had a severe attack of la grippe, followed later by another. During the four years following, my health continued to decline, until finally I was hardly able to move.

"After having the grippe," said Mrs. Smith, "I was able to be about for awhile, and to do some work. But in a short time after the second attack I began to experience nervousness, and often had fainting spells, my trouble being similar to hysterics. I gradually grew worse, and in a short while I became subject to such spells of nervousness that I could do no work, being scarcely able to move about the house. I could not sleep and could not eat. I would lie awake nights, my muscles twitching continuously. My physician called it nervous-

ness of the throat and breast, and after treating me for several months said that my case or any case like mine positively could not be cured. Different physicians in Greensburg and other cities who attended me, agreed that my case was hopeless. For three years I lingered in misery, trying different doctors and remedies, but none did me any noticeable good. Finally my druggist advised me to try Dr. Williams' Pink Pills for Pale People, which was so highly recommended by newspapers. As a last resort I tried them, thinking that if they did me no good death might soon give me relief. The first dose helped me, and with every dose I improved. I took about three boxes and a half and was completely cured, as you see me to-day, perfectly healthy and able to do all my own work."

Dr. Williams' Pink Pills contain, in a condensed form, all the elements necessary to give new life and richness to the blood and restore shattered nerves. They are also a specific for troubles peculiar to females, such as suppressions, irregularities and all forms of weakness. They build up the blood, and restore the glow of health to pale and sallow cheeks. In men they effect a radical cure in all cases arising from mental worry, overwork or excesses of whatever nature. Pink Pills are sold in boxes (never in loose bulk) at 50 cents a box or six boxes for \$2.50, and may be had of all druggists, or direct by mail by addressing Dr. Williams' Medicine Company, Schenectady, N. Y.

This \$5.00 Outfit FREE

The 44 tools and articles in this outfit, purchased singly in retail hardware-stores, would cost not less than \$5.00. We have sold thousands of the outfits in the past few years at \$3.00 each; but owing to the breaking up of the steel trust, and the low price of iron and other raw materials, we are enabled to have them manufactured for a less price than ever before and still furnish a better outfit. In order to sell more outfits this season than ever before, we have decided to give the purchaser the benefit of the lower cost price, also most of our profit (it is the subscription we want); therefore, we offer this

\$5 OUTFIT FOR \$2 OR GIVEN FREE FOR A CLUB AS PER OFFER BELOW.

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All these tools are full-sized and practical in every respect; in fact, they are the same tools, etc., used by regular shoe and harness makers everywhere. We guarantee the outfit to give entire satisfaction or money refunded.

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PATENTS LEHMANN, PATTON & NESBIT, Washington, D. C. Examinations Free. Send for circulars

TYPEWRITER HEADQUARTERS, 102 Fulton St., New York, sell all makes under half price. Don't buy before writing them for unprejudiced advice and prices. Exchanges. Immense stock for selection. Shipped for trial. Guaranteed first class. Largest house in the world. Dealers supplied. 62-page illus. cat. free.

A BIG OFFER 50c. MADE IN A MINUTE! If you will hang up in the P. O., or some public place, the two show

bills that we send, we will give you a 50c. cert., and send it in advance with samples and bills. This will trouble you about one minute, and then if you want to work on salary at \$50 or \$100 per month, let us know. We pay in advance. **GIANT OXIE CO.,** 126 Willow St., Augusta, Me. Mention this paper.

Queries.

READ THIS NOTICE.

Questions from regular subscribers of FARM AND FIRESIDE, and relating to matters of general interest, will be answered in these columns free of charge. Queries desiring immediate replies, or asking information upon matters of personal interest only, should inclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query, in order that we may answer by mail if necessary. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

Rug-machine.—E. W., Hammondsport, N. Y. Rug-machines are made by E. Ross & Co., Toledo, O.

Gourd Seed-corn.—R. W., Houston, Tex. You can get gourd seed-corn from T. W. Wood & Sons, Richmond, Va.

Cabbage-worms.—E. T. L., Sellersburg, Ind. To clean your cabbage of worms, try a small quantity of salt sprinkled over the heart of each plant. Insect-powder, tobacco-dust, road-dust, kerosene emulsion, hot soap-suds, etc., all are good remedies.—T. Gr.

Hull-less and Beardless Barley.—W. A., Chelsea, Mich., and W. R. C., Butler, Ind. Hull-less barley is a sort in which the grain shells out of the chaff like wheat. There are several varieties, one of which is also beardless. You can get seed from D. M. Ferry & Co., Detroit, Mich., and from Iowa Seed Co., Des Moines, Iowa.

Celery-blight.—F. T., Seymour, Conn., writes: "Please inform me what will keep rust from celery."

REPLY BY T. GREINER:—That is something a good many people would like to know. Cool and moist soil and a rather cool and moist atmosphere are the best remedies for the different forms of celery blight or rust. I have sometimes effected a cure by cutting the plants back, trimming off all outside (spotted) leaves, and then applying water abundantly. Shading the plants to some extent has a tendency to keep the blight off, or allow the plants to outgrow it. More on this subject will be said later on.

Tomatoes Failing to Set.—R. A. S., Wilton, Conn., writes: "I got some Matchless tomato-plants, good strong ones, too, but I notice that half, if not more, of the blossoms do not set, and what tomatoes do form split while green before gaining any size. Will you kindly give me the reason why?"

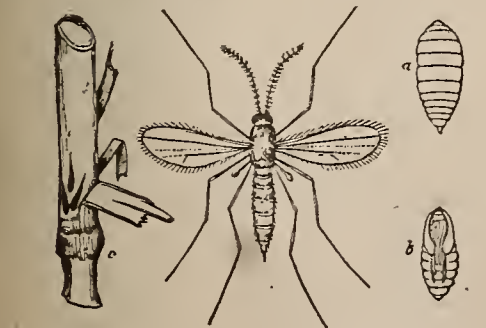
REPLY BY T. GREINER:—During the long rainy spell of July tomatoes, squashes, melons, cucumbers, etc., have only set very sparingly, probably because the pollen did not develop or ripen. Growers of forced vegetables know very well the difficulties they have to overcome in making tomatoes set fruit during the dark days of winter or very early spring. With dryer weather your tomatoes will probably set freely.

Spinach and Asparagus.—G. R., Boston, Pa., writes: "When should I sow spinach-seed for fall and spring use, and how thick should the seed be sown? How close the drills?—How deep and how far apart should asparagus-plants be planted?"

REPLY BY T. GREINER:—For fall use sow spinach-seed at once; for spring use in October. Make the drills a foot apart, sow seed one half to one inch deep, and about four pounds an acre.—Asparagus should be given plenty of room. We want fat stalks, and cannot secure them if plants are set close. Have them at least four feet apart one way and two the other. Some have the rows six feet apart, and plants two feet apart in rows. Others set them four feet apart each way. How deep to set the plants depends on personal preference. I like to set them not less than six inches deep, while some growers, who use the green stalks (grown above ground), only set them three or four inches deep.

Hessian Fly.—S. E. C., Parsons, Kan., writes: "Please describe the Hessian fly."

REPLY:—The accompanying illustration shows the Hessian fly and its young. It is a small, two-winged gnat, resembling a mosquito in shape and size; it is the larva; h. pupa; c. stalk of wheat infested by larvae. Two broods are developed each year, the fly appearing both in autumn and spring. In the autumn the fly lays a number of eggs in the leaves of a young wheat-plant. In a few days, if the weather is warm, the eggs hatch and the larvae work their way downward and crowd themselves between the blades



and stalk, a little below the surface of the ground. Here they remain, heads downward, imbibing the sap from the plant by suction and become embedded by pressure in the side of the stem. The larvae soon change to pupae, or "flaxseeds," and pass the winter in this form. In the spring the flies come forth from the "flaxseeds," and lay their eggs on the leaves around the lower joints of the plant, as shown by c. The spring larvae cause straw-fallen wheat. These become "flaxseed" by harvest-time, and may remain in this form in the stubble until autumn, when the flies come forth in time to deposit eggs on the young wheat-plants. Late sowing is one means of avoiding the Hessian fly. A better plan is to prepare the ground for wheat very early, and sow a strip early on one side of the field as a trap to entice the flies to concentrate and lay their eggs there before the regular crop comes up. Then the wheat on the trap strips should be plowed under and the land resown, thus destroying the pest and protecting the main crop.

VETERINARY.

Conducted by Dr. H. J. Detmers.

To regular subscribers of FARM AND FIRESIDE answers will be given through these columns free of charge. Where an immediate reply by mail is desired, the applicant should inclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Subscribers may send their veterinary queries directly to Dr. H. J. DETMERS, 1315 Neil Avenue, Columbus, Ohio.

NOTE.—Parties who desire an answer to their inquiries in this column must give their name and address, not necessarily for publication, but for other good reasons. Anonymous inquiries are not answered under any circumstances.

Probably Swine-plague.—W. H. M., Agri-cola, Kan. What you describe are common features of swine-plague, or so-called hog-cholera.

Chronic Metritis.—D. M., Bay Shore, Mich. Your cow suffers from chronic metritis, and should not be bred until her sexual organs are again in a perfectly normal condition. Have her treated by a competent veterinarian.

Paralytic Pigs.—W. B., Liberty, Neb. Please consult FARM AND FIRESIDE of August 15th. As to your case, your description would convey the impression that your pigs are dying of swine-plague, if it were not for the statement that the same have good appetites to the last.

Wind-galls.—C. S. B., Bancroft, Mich. It is very seldom that so-called wind-galls cause any lameness; it therefore stands to reason that the lameness you speak of has an entirely different source, which, I have no doubt, will come to light if the horse is thoroughly examined.

Probably Swine-plague.—L. B., Lorton, Neb. What you describe resembles a case of swine-plague (so-called hog-cholera). All you can do is to separate all the animals yet healthy and take them to a non-infected place, if possible on high and dry ground, or, at any rate, on ground that does not receive any drainage from any infected place, and to keep them there in every respect, in regard to attendance as well as to food and drink, strictly separated from anything infected or possibly able to be a carrier of the infectious principle.

Dislocation of Both Patellas in a Young Colt.—E. H., Croton, Mich. Although the patella of one leg became dislocated on the second and that of the other on the third day after the birth of the young colt, the latter would have had a very fair chance of recovery if prompt reposition had been effected, which would not have been very difficult. If the first dislocation had been promptly righted, the second might not have occurred. Without first effecting a reposition an application of astrinents, or of anything else, was entirely uncalled for.

Protection of Cows Against Flies.—C. H. W., Batesville, Ind. The best protection of pasturing cows against the torments of flies is probably applied by the Holland farmers. They cover their cows when in pasture during the fly season with light muslin blankets, and claim that the cost of the blankets is more than compensated for by the increased yield of milk, because thus protected the cows do not need to waste all their energies in warding off the flies, and can without molestation attend to their business—eating, ruminating and resting. A great many German farmers already have adopted the Holland method.

A Lame Steer.—W. R., Uniontown, Kan. Examine the cleft between the hoofs of your steer very thoroughly, even if you should have to throw the animal for examination; and then, if you find the cause there, as I expect you will, cut away with a sharp hook-knife all the loose and decayed horn, clean the sore in a thorough manner, dress the same with a mixture of liquid subacetate of lead and olive-oil, one part of the former to three parts of the latter; cover it with absorbent cotton, and apply a bandage for protection. Renew this dressing twice a day until a healing has been effected. During the treatment keep the steer on a dry and clean floor, and after that keep the same out of mud, manure and water.

A Swelled Udder.—J. S. B., Kansas City, Mo. Your three-year-old Jersey cow either suffers from neglected garget or from tuberculosis in the mammary glands. If it is the former the remedy, unless already too late, consists in frequent milking once every two hours until the swelling has disappeared, and the milk has become normal, and after that three times a day as long as the cow is at the height of milk production. The statements, however, that the cow lost her calf, that she is very thin, and that the swelled part of the udder does not seem to be painful, especially if it is also taken into consideration that the cow is a Jersey, raise a suspicion that the disease of the udder may be tuberculosis. Almost absolute certainty can be obtained by subjecting the cow to the tuberculin test; and as there will be no difficulty to find in Kansas City a veterinarian prepared to apply it, I would most decidedly advise you to have it done; in fact, I would not buy any Jersey cow without having her first subjected to that test.

Run a Nail Into the Fore Knee.—G. C., Kearney, Neb. As the accident to your horse already happened in the spring, as it does not proceed from your communication how deep the nail entered and what parts have been injured, and as the wound, which has not yet healed, has now assumed a fistulous character, it will be by far the best to have the animal treated by a competent veterinarian, because in such a case it is a very precarious thing to prescribe a treatment without having an opportunity to make a thorough examination and thus ascertain the true condition and extent of the injury. If no veterinarian is available, the first thing necessary will be a thorough examination of the fistulous canal by carefully probing, so as to learn at least its extent and direction. If then you find that the bottom is lower than the opening, the first thing required will be a surgical operation, for which I can give no directions, because I do not know the depth and direction of the fistulous canal, and you only stated in general terms where the nail entered. If the bottom is not lower than the opening and the canal straight, you may risk it and insert a stick of lunar caustic, and then by protecting the sore and keeping it clean you may succeed in effecting a healing. A case like yours ought to have been attended to at once by a competent veterinarian.

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An Entire Set of 6 Spoons Counts as One Premium. This Illustration Shows Exact Size of Tablespoons.

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Our new teaspoons have given such universal satisfaction that many have asked us if we could not furnish tablespoons to match. We are now able to do so, also able to furnish a sugar-shell and a butter-knife to match the spoons. They are all made of the same metal, have same proportion of silver-plate, and are

Guaranteed to be as Described Below and to Give Entire Satisfaction or Money Refunded.

These spoons are made of solid nickel-silver metal all the way through, and then well plated with coin-silver. They can be used in cooking, eating, medicines and acids the same as solid silver spoons. These spoons will not, cannot turn brassy, will not corrode or rust, and are strong and hard. Spoons of equal merit are sold in the average jewelry-store for about \$2.50 a set; but because we buy them direct from the manufacturers in enormous quantities, and because we do not make any profit off of spoons (the subscription is all we want), we are enabled to furnish them at the biggest bargain possible. In beauty and finish they are perfect, and for daily use, year after year, nothing (except solid coin-silver, which cost about \$10.00 a set) excels these spoons. They are silver color through and through, and will last a lifetime.

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Set of 6 Tablespoons, and This Paper One Year, \$1.25
Set of 6 Teaspoons, and This Paper One Year, .75
The Sugar-shell, and This Paper One Year, .50
The Butter-knife, and This Paper One Year, .50

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If ordered at one time and to one address, we will send the set of 6 tablespoons, set of 6 teaspoons, 1 butter-knife and 1 sugar-shell, 14 pieces in all, and this paper one year, for TWO DOLLARS.

INITIAL LETTER Each and every teaspoon, tablespoon, sugar-shell and butter-knife will be engraved free of charge with an initial letter in Old English.

WILL STAND ANY TEST.
To test this silverware, use a file. If not found as represented, we will refund your money and make you a present of the subscription. If returned to us we will replace, free of charge, the piece of ware damaged in making the test, provided you tell some of your neighbors what the test proved.

When any of the above offers are accepted no commission is allowed and the names cannot count in a club, but the paper will be sent to one address and the premium to another if so desired.

FARM AND FIRESIDE,
Postage paid by us. SPRINGFIELD, OHIO.

Our Miscellany.

For the first time in the history of Cornell University the "Steward L. Woodford prize in oratory" has been won by a woman. The winner is Miss Harriet C. Conuor, of Burlington, Iowa.

The farmer who does not learn all about the "Southwick" Hay Press, made by the Sandwich Manufacturing Co., 125 Main St., Sandwich, Ill., before he buys makes a mistake. Send to them for their catalogue and price-list, free.

THE well-known British statistician, Mr. Mulball, points out in a paper on the subject that, relatively to population, no European country can vie with New England in the matter of manufacture, the fact being stated that, in the case of the latter, the value of the annual output represents \$319 an inhabitant, while in the case of Great Britain it is but \$115; Belgium, \$88, and France, \$74. The rate, moreover, at which manufactures have advanced in New England he finds to be incomparably in excess of the rate in Great Britain: thus the annual value of manufactures to the inhabitant of Great Britain was \$111 in 1850, and but \$4 more in 1890, while during the same period in New England it rose from \$104 to \$319. In other words, British manufactures in general, during the last forty years, have done little more than keep pace with the population, while those of New England show a ratio to the inhabitant three times greater than that of 1850.—New York Sun.

AN exquisite art production is "Our Old Shop," published by Studebaker Bros. Mfg. Co., South Bend, Ind. It tells all about the lightest running and most durable wagon made, "The Studebaker." Write them for it. It is sent free if you mention FARM AND FIRESIDE.

If the details and figures given by a correspondent of the Chicago "Record" are exact, concerning one of the pumps of the Calumet and Hecla mine, it is without doubt the greatest mechanism of the kind in the world, its capacity of water delivery being some two and one half million gallons every hour in the twenty-four, and even then without reaching its utmost. The apparatus is a triple expansion pumping-engine with a capacity of sixty million gallons, standing nearly fifty feet in height, and requiring fifteen hundred horse-power for its operation; and, it has been proved by actual tests that its nominal performance can be easily maintained for an indefinite time without injury or strain, and that, pushed to the full extent, the pump could handle approximately seventy-five million gallons in twenty-four consecutive hours. The purpose of this pump is to furnish water for the great stamp-mills of the Calumet and Hecla Company, which has twenty-two steam-pumps in continuous operation, daily pulverizing five thousand tons of conglomerate rock into sand so fine that it can be carried away by a stream of swiftly running water. The pump is located near the lake shore and below the mills, so as to force a steady stream of water to the upper portions of the mill, where innumerable small jets play upon the slime-tables and jigs. Here it is that the specific gravity of the fine particles of copper contained in the rock separate the valuable mineral from the mass of worthless sand, the size and force of the streams of water being so nicely regulated as to wash away the sand and yet carry with it the minimum of copper.

In another column appears a shoe advertisement of the great house of Siegel, Cooper & Co., Chicago. They do a big mail order business all over the country in all lines of goods, and doubtless have many patrons among the readers of FARM AND FIRESIDE.

HIS JOB IS GONE.

The past few weeks have been fraught with woe, woe, woe, for the calamity bowler. His job is gone, and let us hope he will seek some dark and noisome cave far removed from civilization and biberate till the human beings now on earth will forget that there ever existed such a disagreeable thing, bearing the semblance to mankind.

From every quarter comes bright news. In nearly every branch of business there is noted either a decided improvement or infallible signs of early improvement. Capital is seeking investment; merchants stocking up; real estate changing hands; prices of products of farm and mine advancing; big manufacturing plants preparing to increase output, and business men taking hold with renewed confidence.

Trade has shown a steady increase from the first of the year, and prospects were never brighter for good trade than at present.—Farm Machinery.

CHEAP EXCURSION WEST VIA BURLINGTON ROUTE.

One fare plus \$2.00 for the round trip to Nebraska, Kansas, St. Paul, Minneapolis, Black Hills, certain portions of Iowa, Colorado and Utah, Sept. 7th, 21st, Oct. 5th and 19th. Ask your ticket agent for additional information. L. W. WARELEY, General Passenger Agent, St. Louis, Mo.

Recent Publications.

BOOK NOTICES.

HOUSE-PLANTS, AND HOW TO SUCCEED WITH THEM. By Lizzie Page Hillhouse. A practical handbook for women who have no hot-house or conservatory, on the culture of many plants that can be successfully raised in the house. Price \$1. A. T. De La Mare Printing and Publishing Co., 2 to 8 Duane St., New York.

HISTORY OF MONETARY SYSTEMS. A record of actual experiments made by various states of the ancient and modern world, as drawn from their statutes, customs, treaties, mining regulations, jurisprudence, history, archaeology, coins, nummular systems, and other sources of information. By Alexander Del Mar, M.E., author of "A History of the Precious Metals," "Money and Civilization," "Science of money," etc. Published by Charles H. Kerr & Company, Chicago.

CATALOGUES RECEIVED.

Electric Wheel Co., Quincy, Ill. Preservation of Farm Products. An illustrated pamphlet describing low-down wagons or wide-tire metal wheels.

Peter Henderson & Co., 35 and 37 Cortlandt St., New York. Descriptive catalogue of seeds, bulbs, plants, tools, etc.

Samuel Cushman, Pawtucket, R. I. Interesting pamphlet on the development of the poultry industry.

The Samuel Wilson Co., Mechanicsville, Bucks county, Pa. Fall catalogue of seed-wheat, fruit-trees, small fruits, flowering plants, fancy poultry, German hares, etc.

German Kali Works, 93-99 Nassau St., New York. Pamphlet, "Use of Potash in German Agriculture," by Dr. Maercker, Director of Experiment Station, Halle, Germany.

BOUNTIFUL CROPS

Are now harvested in Oklahoma and Kansas on the line of the Chicago, Rock Island & Pacific Railway.

It is the best district to engage in farming and lands are cheap. Purchase while you can get a bargain and secure what you want—a farm and home. It is in the right latitude. The Oklahoma district is settling rapidly. Soil is good. Crops abundant. Excursions twice a month. Send for full particulars and map of this district at once. Address

JOHN SEBASTIAN, G. P. A., Chicago.

THE GREENHORN'S ADVANTAGE.

I was sitting on a keg of nails in a West Virginia mountain store watching a native dickering with the merchant over a trade of a basket of eggs for a calico dress. After some time a bargain was closed, the native walked out with the dress in a bundle under his arm, and I followed him.

"It isn't any business of mine," I said, "but I was watching that trade, and was surprised to see you let the eggs go for the dress."

"What fer?" he asked in astonishment, as he mounted his horse.

"How many eggs did you have?"

"Basketful."

"How many dozen?"

"Dunno. Can't count."

"That's where you miss the advantages of education. With knowledge you might have got two dresses for those eggs."

"But I didn't want two dresses, mister," he argued.

"Perhaps not, but that was no reason why you should have paid two prices for one. The merchant got the advantage of you because of his education. He knew what he was about."

He looked at me for a minute, as if he felt real sorry for me. Then he grinned and pulled his horse over close to me.

"I reckon," he half whispered, casting furtive glances toward the store, "his education ain't so much more'n mine ez you think it is. He don't know how many uv them aigs is spiled, an' I do," and he rode away before I could argue further.—Boston Herald.

TRIAL FREE.

If you have rheumatism, try that simple remedy which cured me. Trial package and other information free. Address John A. Smith, Dept. H, Milwaukee, Wis.



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By using our (stove pipe) RADIATOR. With its 120 Cross Tubes, ONE stove or furnace does the work of TWO. Drop postal for proofs from prominent men.

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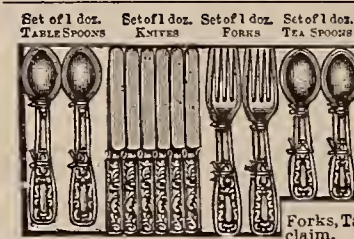
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21 River Street,
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48 PIECES SILVERWARE FREE
12 Knives, 12 Forks, 12 Table Spoons, & 12 Tea Spoons, all full size & of beautiful floral design, made by the Sterling Silver Plate Co. & guaranteed. This valuable service given free to every person answering this advertisement who will send our Remedies. We don't ask you to pay one cent. If you will agree to sell among your friends only 3 boxes of our Positive Corn Cure & 3 boxes of our Vegetable Pills at 25 cts. per box, & promise to return us the money for them or return our goods if you can't sell. Write to-day & we will send you the Remedies at once. And we will send absolutely free a complete set of our Silver Plated table ware as described above when you send us the money. This is an extraordinary offer to quickly put our Remedies within reach of all & we guarantee the Knives, Forks, Table Spoons & Tea Spoons we give for selling our Remedies to be exactly as we claim. Address **PARILLA DRUG CO., 25 Third Ave., New York City.**

\$200.00 for CORRECT ANSWERS!

Most Unique Contest of the Age — \$200.00 Paid for Correct Lists made by Supplying Missing Letters in Places of Dashes — No Lottery — Popular Plan of Education — Read All the Particulars.

In the United States four times as much money is expended for education as for the military. Brain is better than brawn. By our educational facilities we have become a great nation. We, the publishers of *Woman's World* and *Jenness Miller Monthly*, have done much toward the cause of education in many ways, but now we offer you an opportunity to display your knowledge and receive most generous payment for a little study. The object of this contest is to give an impetus to many dormant minds to awaken and think; also we expect by this competition of brains to extend the circulation of *Woman's World* and *Jenness Miller Monthly* to such a size that we shall be able to charge double the present rate for advertising in our columns. By this plan of increasing the number of subscriptions and receiving more money from advertisers of soaps, pianos, medicines, books, baking powders, jewelry, etc., we shall add \$50,000 a year to our income, and with this mathematical deduction before us, we have decided to operate this most remarkable "missing letters" contest.

HERE'S WHAT YOU ARE TO DO.

There are thirty words in this schedule, from each of which letters have been omitted and their places have been supplied by dashes. To fill in the blank spaces and get the names properly you must have some knowledge of geography and history. We want you to spell out as many words as you can, then send to us with 25 cents to pay for a three months' subscription to *WOMAN'S WORLD*. For correct lists we shall give \$200.00 in cash. If more than one person sends a full, correct list, the money will be awarded to the fifty best lists in appearance. Also, if your list contains twenty or more correct words, we shall send you a beautiful *Egeria Diamond Scarf Pin* (for lady or gentleman), the regular price of which is \$2.25. Therefore, by sending your list, you are positively certain of the \$2.25 prize, and by being careful to send a correct list you have an opportunity of the \$200.00 cash award. The distance that you may live from New York makes no difference. All have equal opportunity for winning.

PRIZES WILL BE SENT PROMPTLY.

Prizes will be honestly awarded and promptly sent. We publish the list of words to be studied out. In making your list of answers, be sure to give the number of each word:

- | | |
|---|--|
| 1. - R A - I - A country of South America. | 16. B - S M - - K A noted ruler. |
| 2. - A - I - I - Name of the largest body of water. | 17. - - C T O - I - Another noted ruler. |
| 3. M - D - - E - - A - E - - A sea. | 18. P - R - U - A - Country of Europe. |
| 4. - M - - O - A large river. | 19. A - S T - A - I - A big island. |
| 5. T - A - - S Well known river of Europe. | 20. M - - I N - E - Name of the most prominent American. |
| 6. S - - A N - A - A city in one of the Southern States. | 21. T - - A - One of the United States. |
| 7. H - - - - - X A city of Canada. | 22. J - F - - R - - N Once President of the United States. |
| 8. N - A - A - A Noted for display of water. | 23. - U - - N A large lake. |
| 9. - E - - E - - E - One of the United States. | 24. E - E - S - N A noted poet. |
| 10. - A - R I - A city of Spain. | 25. C - R - A A foreign country, same size as Kansas. |
| 11. H - V - - A A city on a well known island. | 26. B - R - - O A large island. |
| 12. S - M - E - A well known old fort of the United States. | 27. W - M - - S W - R - D Popular family magazine. |
| 13. G - - R - L - A - Greatest fortification in the world. | 28. B - H - I - G A sea. |
| 14. S - A - L E - A great explorer. | 29. A - L - N - I - An ocean. |
| 15. C - L - F - - - I - One of the United States. | 30. M - D - G - S - A - An island near Africa. |

In sending your list of words, mention whether you want prize money sent by bank draft, money order or registered mail; we will send any way that winners require. The *Egeria Diamond* is a perfect imitation of a Real Diamond of large size. We defy experts to distinguish it from real except by microscopic test. In every respect it serves the purpose of Genuine Diamond of Purest Quality. It is artistically mounted in a fine gold-plated pin, warranted to wear forever. This piece of jewelry will make a most desirable gift to a friend if you do not need it yourself. At present our supply of these gifts is limited, and if they are all gone when your set of answers comes in, we shall send you \$2.25 in money instead of the Scarf or Shawl Pin, so you shall either receive the piece of jewelry or the equivalent in cash, in addition to your participative interest in the \$200.00 cash prize. This entire offer is an honest one, made by a responsible publishing house. We refer to mercantile agencies and any bank in New York. We will promptly refund money to you if you are dissatisfied. What more can we do? Now study, and exchange slight brain work for cash. With your list of answers send 25 cents to pay for three months' subscription to our great family magazine, *Woman's World*. If you have already subscribed, mention that fact in your letter, and we will extend your subscription from the time the present one expires. To avoid loss in sending silver, wrap money very carefully in paper before inclosing in your letter. Address:

JAMES H. PLUMMER, Publisher,
22 & 24 North William Street, Dept. 540, New York City, N. Y.

Smiles.

DOMESTIC.

He takes to the use of red liquor,
But ought people therefore to snuquor?
His dear little wife,
Once the joy of his life,
Now bikes—and that, too, in the "kniquor."
—Puck.

WOULDN'T IT?

Now wouldn't it be nice
Ou a plunging ship of ice
To sail away where arctic waters roll?
To fare and fare away,
Where it's freezing every day,
And hang our summer strawhats on the pole?
To present our tickets there
Where the dancing polar bear
Gives the only entertainment—without price?
To shake his frigid paws,
And to give him our applause,
In a comfortable theater of ice?
—Atlanta Constitution.

LOVE IN THE COUNTRY.

YES," said the village gossip, "John wuz always a-pestering of Sue about marryin' of him, an' she'd doue told him 'No' more times'n I could tell you."
"You don't say!"
"Hit's true as preachin'." Well, you know, John carries the mail."
"Yes, I've hearn tell he does."
"An' las' Wednesday wuz a week. Sue wuz a-travelin' 'long with him, goin' ter town, when John ups and says ef she didn't make up ter marry him he'd make the boss run down hill tell all three of 'em wuz drowned in the bottom er the river."
"Do tell!"
"That's what! But what do you reckon Sue did?"
"Lord knows!"
"Caught John by the collar, jerked him outen the huggy, grabbed up a live rattle-snake what wuz a-sleepin' by the roadside, an' lanbasted John with it till he couldn't stan'!"
"Laws a-massy!"
"Then she stomped the snake ter death, an' John—he took ter his bed, whar he laid for two weeks; an' Sue got sorry fer him, an' uussed him, an' killed a heef ter make stew fer him, an' now—what do you reckon?"
"I dunno!"
"She's a-goin' ter marry him!"—Atlanta Constitution.

HE GAVE IT UP.

"Do you make keys here?" asked the woman, as she entered a locksmith's shop.
"Yes'm."
"Well, I want one."
"What sort of a key, ma'am?"
"One for the front door."
"Have you a duplicate?"
"No."
"Bring the lock?"
"No."
"What sort of a key is it?"
"I—I don't remember."
"But how am I to guess? There are about 40,000 different kinds of keys."
"H'm. I didn't know that."
"Is it a night-key?"
"Yes, yes. That's it. It's a night-key."
"But that's also very indefinite."
"Well, my husband sometimes comes home at midnight and unlocks the door with his pocket-knife or button-hook or anything else that comes handy, and you ought to know about what sort of a key would fit such a lock."
He studied over it awhile, but finally had to admit that he was up a tree.—Detroit Free Press.

WANTED SPICE OF VARIETY IN LIFE.

The expression of the editor's face showed that he was easily irritated, and the contractor into whose office he walked braced himself for trouble.
"I wish," said the irritable man, "that you would do me a favor in connection with the work on my house."
"Anything that we can do will be cheerfully attended to."
"Thank you. I wish you'd send a man to do the painting."
"But the one we have there is an excellent workman."
"I don't doubt that. But he's been there three days and he hasn't whistled anything but 'Tell Them That You Saw Me.' I'm pretty slow at catching a tune, but I've learned that with all the variations, and if it's just the same to you I'd like to start in on a new one."—Washington Star.

HOW IT WORKED.

A—"Well, how did you sleep last night? Did you follow my advice and begin counting?"
B—"Yes. I counted up to 18,000."
A—"And then you fell asleep?"
B—"No; then it was time to get up."—Tit-bits.

BICYCLE TALK.

The following dialogue between the different parts of a bicycle was recently overheard:
"I am the greatest of you all," said the saddle, "have the highest position, and always sit before the bar. I offer a seat to my rider, and when he is thirsty I allow him the use of my spring."
The hub then spoke up as follows: "Don't listen to that conceited piece of cowhide; he makes us all sick. Why, the handle-bars have the grip, the rims feel tired, the lamp is weak, the tires feel very much depressed, and even the sprocket-wheel has the toothache."
The tire, wishing to distinguish himself, shouted to the cyclometer: "You've got wheels in your head."
"You're full of wind," retorted the cyclometer.
The crank, who also wanted to be heard, shouted up the tube to the head of the wheel, saying: "If you don't look out that sovereign I lent you, I'll wrench your neck, brake your crown and put you in chains."
"Come off," he replied: "you only make your living by pedaling."
The axle exclaimed: "Say, boys, the tire is going to blow himself, and invites us all to come down to the hub and have a ball!"—New York Advertiser.

SCRIPTURAL INJUNCTIONS.

"Brudder Johnsing," remarked Parson Jackson, covetously, "dat's a powahful fine watah-millio' yo' 'totin'."
"Deed it am, pahsou," replied the deacon. "But remembah de scriptuahs—'Thou shalt not covet.'"
"I does remembah," sadly answered the parson; "hut I also recalls de verses, 'De Lawd loveth a cheerful gibah,' an' 'He dat glbath toe de poah lendeth toe de Lawd.' Brudder Johnsing, I's a powahful poah man."
"Dat's true, pahsou; but de Bible says 'dat de Lawd helps dem dat helps demselbes. Dat's de way I got dis watah-millio'. Cunnel Ryestraw's got a fine patch ob millions."—Judge.

THE MOTION WAS CARRIED.

"It seems strange to me, Miss Sorghum," remarked the young man, "that so many of our congressmen, even those of experience, are repeatedly declared out of order."
"Really, Mr. Staylate," replied the senator's daughter, "it is not so strange, after all. Now, if I recall my Cushing correctly, there is but one motion that is always in order. Am I not right?"
With a sinking heart and a sickening sense of hope forever vanished, the young man recalled that such is indeed the fact, and that the one motion always in order is the motion to adjourn!—Truth.

TOOK A DOLLAR FOR A HEN-ROOST.

An old ducky was arrested for stealing a silver dollar. The dollar was found on his person and produced in court.
"You stole this money?" asked the judge.
"Dat's whut dey says, suh!"
"Well, what have you to say for yourself?"
"Well, suh, nutin' much, 'ceptin' dat I wuz driv'er it."
"Driven to it?"
"Yes, suh. You see, jedge, dat dollar had a bird on it, eu it look so much like a game chicken dat I thought I wuz in a hen-roost, en des nachully bagged it."—Atlanta Constitution.

NOT A GOOD ENGLISH REPLY.

A gentleman had left his corner seat in an already crowded railway car, to go in search of something to eat, leaving a rug to reserve his seat. On returning he found that in spite of the rug and the protests of his fellow-passengers the seat had been usurped by one in lady's garments. To his protestations her lofty reply was:
"Do you know, sir, that I am one of the director's wives?"
"Madam," he replied, "were you the director's only wife, I should still protest."—Argonaut.

THE EXACT TROUBLE.

Bacon—"Have you seen Sprockett lately?"
Egbert—"No."
Bacon—"He's a sight. Face all cut, arm in a sling, and walks lame."
Egbert—"How did he do it; on his bicycle?"
Bacon—"No; if he could have staid on his bicycle he'd have been all right."—Yonkers Statesman.

THE FRONT THAT FAILED.

"Courage!" he whispered to his heart. He tried to put on a bold front. But his pink shirt with the large blue checks had not only faded in the wash, it had also shrunk.—Puck.

DIFFERENT NOW.

"He has consulted every prominent doctor in the country, and now they say his case is hopeless."
"Why, I thought he expected to be cured."
"But that was before his money ran out."—Life.

WISE WOMEN.

Those Who Heed the First Symptoms of Nervous Derangement.

Special from Mrs. Pinkham.

A dull, aching pain at the lower part of the back and a sensation of little rills of heat, or chills running down the spine, are symptoms of general womb derangement.

If these symptoms are not accompanied by leucorrhœa, they are precursors of that weakness. It is worse than folly to neglect these symptoms. Any woman of common sense will take steps to cure herself.

She will realize that her generative system is in need of help, and that a good restorative medicine is a positive necessity. It must be a medicine with specific virtues. As a friend, a woman friend, let me advise the use of Lydia E. Pinkham's Vegetable Compound.

If your case has progressed so that a troublesome discharge is already established, do not delay, take the Vegetable Compound at once, so as to tone up your whole nervous system; you can get it at any reliable drug store. You ought also to use a local application, or else the corrosive discharge will set up an inflammation and hardening of the parts. Mrs. Pinkham's Sanative Wash is put up in packets at 25 cents each. To relieve this painful condition this Sanative Wash is worth its weight in gold.

MRS. GEORGE W. SHEPARD, Watervliet, N. Y., says: "I am glad to state that I am cured from the worst form of female weakness. I was troubled very much with leucorrhœa, bearing-down pains and backache. Before using Mrs. Pinkham's Remedies it seemed that I had no strength at all. I was in pain all over. I began to feel better after taking the first dose of Vegetable Compound. I have used five bottles, and I feel like a new woman. I know if other suffering women would only try it, it would help them."

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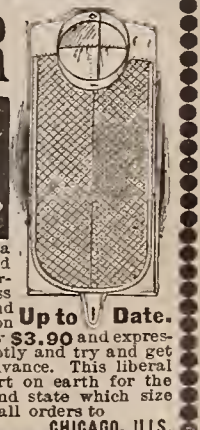
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FREE. We will send **Free** to any person one of these heavy rolled gold plate Initial Scarf Pins, or Ladies' Stick Pins, two inches long, (we only show the top,) on the condition that you send a two cent stamp to pay postage. Please send this advertisement and state which letter you want. Address: **LYNN & CO.**, 48 BOND STREET, NEW YORK.

NEW DRESS SET, 10c.

A new and beautiful design set including pair of ball end rigid link Cuff buttons, 3 studs, 1 collar button and new patent belt retainer; in 14 K Roman gold or sterling silver. Extra heavy plate. Worth 25c. in any store. To give you an inkling of our 1,000 Bargains we send complete set and large catalogue post-paid ONLY 10 CTS. 3 for 25c. **Ingersoll & Bro., Dept. 16**, 65 Cortlandt St., N.Y. City.

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"What wuz you a-dumbin'?"

Comic Illustrations

The book is fully illustrated by pictures drawn by a noted comic artist. The four illustrations shown on this page are from the book, and give an idea of the treat in store for all who order a copy. Comic illustrations are the fun-makers for the eyes, and are enjoyed alike by the child who cannot even read and the wise man. The amusement afforded by simply turning the leaves and looking at the pictures in the book is worth more than what we ask for it and a year's subscription.

The Funniest Books Ever Written

To a vast portion of the reading public the works of Marietta Holley, who writes under the name of "Josiah Allen's Wife," and whose books are commonly known as the "Samantha" books, are the funniest ever written. The quaint and homely expression of Samantha Allen, the doings of her life "pardner," Josiah, the gossip about her neighbors, and her "moralizen" on subjects in general in her inimitably humorous way, are really very funny. Yet she draws many a good moral and drives home many a lesson between laughs. Her fun is as pure and wholesome as a little child's prattle, and her books can be read with profit as well as pleasure by every member of the family. Her latest book, "Samantha Among the Brethren," is considered by many to be the best book she has ever written.



"Oh! argue and dispute with a dyin' man!"

A New Samantha Book

BY JOSIAH ALLEN'S WIFE,
Author of "Samantha at Saratoga."

Entitled "Samantha Among the Brethren."

Every reader, especially every reader who enjoys a hearty laugh and rollicking fun, will be pleased to learn that we now have another Samantha book. It is one of the author's best books. Heretofore it has been sold by agents, and, of course, at a high price. We recently purchased the right to publish the book, and for the first time this excellent work is offered to the public at a price which every one can afford to pay. It is

FULL OF FUN AND COMMON SENSE.



"Wedlock's peaceful repose."

(Illustration reduced size.)

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and
Most
Popular
of
All the
Samantha
Books

Premium No. 55.

If You
Want to Laugh
and Grow Fat,
Read
"Samantha
Among
the Brethren"

Present subscribers who accept the following or any other offer in this issue of the paper will have their time extended One Year.



"I want 'em to ketch me!"

Our Cheap Introductory Offer

Over 100,000 copies of this book were sold by canvassing agents for \$2.50 a copy, which is the regular agents' price for all the Samantha books. Of course, at this price the purchaser got a fine binding; but the agent and publisher got a big profit, too. Our edition of the book contains every word found in the \$2.50 edition. Our regular price for a year's subscription and a copy of the book is 60 cents, but in order to introduce and advertise it we make the following remarkable offer:

We will send "Samantha Among the Brethren," and Farm and Fireside One Year, for 35 cents. Think of it, only 35 cents!

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Premium No. 466.



40 BULBS ASSORTED AS FOLLOWS:

- | | |
|-----------------------------|------------|
| 5 Hyacinths. | 2 Tulips. |
| 1 Giant Golden Sacred Lily. | |
| 3 Narcissus or Daffodils. | |
| 3 Anemones. | 5 Ixias. |
| 4 Crocuses. | 6 Scillas. |
| 3 Snowdrops. | 3 Oxalis. |
| 2 Freesias. | 3 Irises. |



Giant Golden Sacred Lily.

Hyacinths are the most popular of all winter-blooming plants. Passing down a city street when snow covers the ground, it is a treat to see numerous windows filled with the magnificent bloom of the hyacinth. They are very beautiful and very fragrant.

Tulips are such universal favorites that it is scarcely necessary to expatiate upon their merits here. Their ease of culture, combined with beauty of form and gorgeous coloring, renders them the most popular bulbs grown for spring bedding, and for winter flowering in windows they are incomparable. The tulip is extremely hardy and of easy culture, flowering as freely in the shade as in the sunshine.

Narcissus or Daffodils Sweet barbingers of Spring, that jump from old Winter's lap, and bedeck the earth with beauty, filling the air with delicious perfume. "The Flowers of the Poets" merit all the praise that can be bestowed upon them. Appearing as they do just after bleak winter, they turn our gardens and lawns into gorgeous masses of gold and silver, with a fragrance that is enchanting. They are equally valuable for growing in pots for winter flowering. They are perfectly hardy.

Giant Golden Sacred Lily hears a lavish profusion of flowers with golden-yellow cups. It is of exquisite beauty and perfume. It is grown by the Chinese according to their ancient custom, to herald the advent of their new year, and as a symbol of good luck. The incredibly short time required to bring the bulbs into bloom (four to six weeks after planting) is one of the wonders of nature. "You can almost see them grow." They do well in pots of earth, but are more novel and beautiful grown in shallow bowls of water, with enough pebbles to prevent them from toppling over when in bloom.

Snowdrops Beautiful white flowers, pushing up through the snow in the spring, a habit from which arose this name. They are lovely blossoms, and should be found in every garden. Indoors they are equally pretty, and easily brought into bloom. They are usually planted along walks or in the margin of beds.

Ixias The Ixias produce their beautiful flowers in spikes, and are of the most dazzling and brilliant colors, and sure to attract great attention. It is only a few years that they have been grown in this country to any extent, but in that time, like the freesia, they have become very popular. For pot culture in the house they give great satisfaction, being of easy culture and free bloomers. Five bulbs can be planted in a five-inch pot, and the display will be magnificent. Lovers of odd and beautiful flowers should add them to their collection.

Crocus The crocus is one of the first flowers of spring, and one of the best for blooming in the house during winter. Four bulbs may be planted in one pot, and will make a very pretty show. For garden culture plant bulbs two inches deep, and two or three inches apart. They are so pretty they ought to be found in every garden in abundance. They bloom splendidly when planted on the lawn among the grass. They bloom very early.

Anemones Very beautiful and brilliant spring-flowering bulbs, which should be found in all gardens. They possess a beautiful range of very fine colors, such as brilliant scarlet, red, blue, rose, striped, carnation, etc. For pot culture they are very fine indeed, and succeed best if left in the same pot year after year without removing or disturbing.

Freesia No description can do adequate justice to this beautiful plant. The flowers are two inches long and about the same width, shaped like miniature gladioli, borne in clusters of six to ten on depressed horizontal scapes. The body of the flower is pure white, with lower segments spotted lemon-yellow. The perfume is most delicious, and one plant is sufficient to perfume a large room. Its cultivation is of the simplest, requiring only to be potted, watered sparingly at first, placed in a sunny window and watered more as growth progresses. When out of flower, store in some place and repot at proper season in fresh soil for another year's growth.

Oxalis This is one of the finest winter-flowering plants for pot culture. It is such a strong, luxuriant grower that one bulb will be sufficient for a six or eight inch pot. Place in a dark, cool position for a few weeks to root thoroughly, and remove to a sunny situation in the window, and the great profusion of bloom produced in uninterrupted abundance for weeks will astonish and delight you. Flowers of the purest bright buttercup-yellow. Well-grown plants have produced as high as seventy flower-stems at one time, and over one thousand flowers in one season. The flowers, and frequently the leaves, fold up at night and open again the next morning, but when grown in a partially shaded situation the flowers remain open all the time. They will flower in about eight weeks from the time the bulbs are planted.


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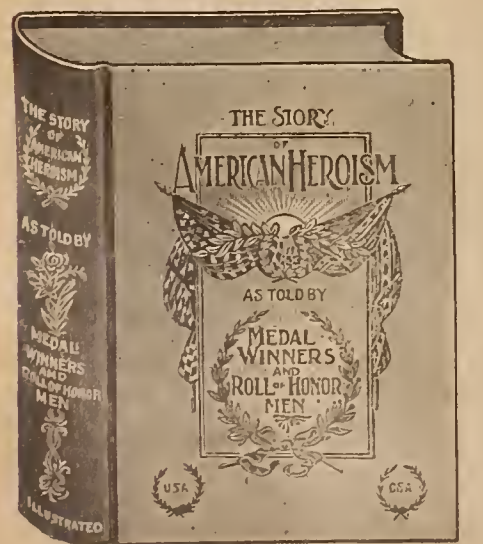
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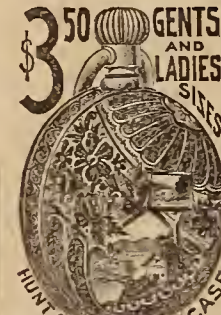
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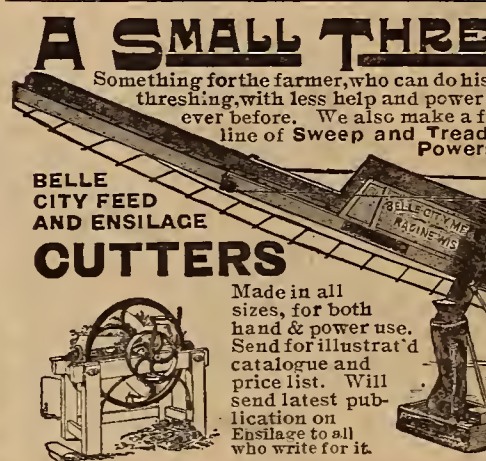


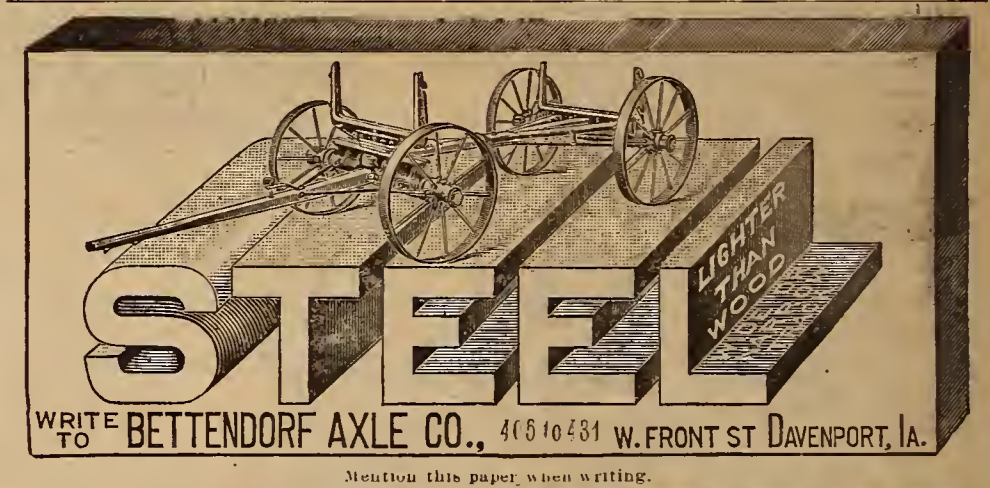
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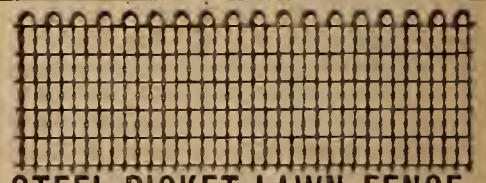
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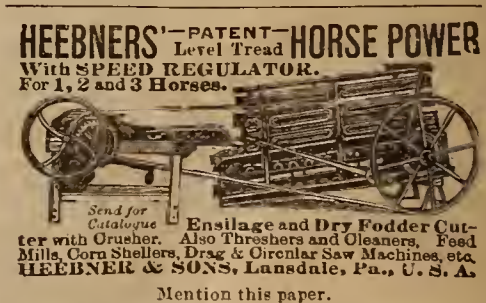
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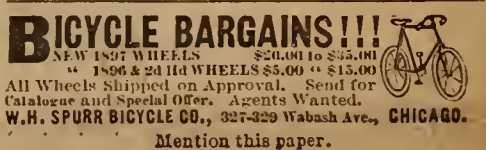
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VOL. XX. NO. 24.

SEPTEMBER 15, 1897.

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assured of a supply of beets before it will build a factory, and there must be a factory near before farmers will raise beets for sugar-making. The business can get a successful start in a community only by harmonious organization and combination of manufacturers and growers.

In this country the greatest difficulty is the agricultural part of the industry. Profitable sugar-beet culture is one of the fine arts of agriculture. In order to be grown successfully the sugar-beet must be grown scientifically. Growers must learn and follow correct methods or fail. It is simply a question of better farming than that which produces the ordinary crops of wheat and corn. Successful sugar-beet culture is a school of agriculture for every locality in which it is established. Farmers learn how much can be accomplished by correct methods of crop culture, and apply the knowledge to every other branch of agriculture. In every locality where the industry has been established the land has at least doubled in value. This season over twenty thousand farmers in different parts of the country are growing beets for tests, which is evidence of an intense interest in the subject.

In a recent address at the Ohio state fair Secretary Wilson said, in part: "Improved transportation facilities have brought the ends of the earth together. The Ohio farmer not only competes with every other farmer in the United States, but the production of grains, meats, etc., in South America, Africa and Asia have a direct bearing upon the prices paid in the United States. Wheat sells higher this year because South American, European and Asiatic crops are not up to the average and because the home market is improving. Cheap food in the United States has been the greatest incentive to manufacturing. The magnitude of farm crops has encouraged railroad and canal building. Inventions have enabled carriers and manufacturers to reduce prices to correspond with the lower prices of farm products. The interests of all classes in the community are inseparably bound together.

"I have been looking over our purchases from foreign countries of things we might produce in the United States, and find that sugar, hides, wool, silk, fruits, tea, wines, live animals, rice, hay, flax, hemp, cheese, eggs, wheat, barley and beans, and other products imported each year cost us over \$382,000,000. We sell cotton, wheat, corn, cattle, lard, bacon, fresh beef, hams, oleomargarine, leaf tobacco, oil-cake and other articles for which we receive nearly \$572,000,000. You see the agricultural products we buy make a fearful hole in the income.

"Great Britain buys \$65,000,000 worth of butter every year and a very large quantity of cheese, but the United States furnishes less than one per cent of the butter. It is the intention of the Department of Agriculture to keep shipping fine butters to England until that people becomes thoroughly satisfied that our butters are as fine as those made anywhere. As soon as we get the way opened for butter we will take up the exportation of cheese. As soon as we have made the British public familiar with our dairy products we will open the markets of continental Europe in this and other lines.

"The American farmer produces too much raw material with which the foreigner makes high-priced products. We send abroad cheap grains to enable the foreigner to make butter that competes with ours in the world's markets. The people of Ohio should not sell a bushel of corn to any other people under the sun. We meet the Danish people in the British market with our dairy products. We furnish them with the cheapest cow feed in the world to enable them to compete with us. It would be much more sensible if the American farmer would turn

his raw material into higher-priced products. Ohio lands are not producing as well as they did ten years ago. There is an absolute necessity for establishing factories on every farm in order to maintain the fertility of the soil. The farm factory will consume all of the grain, hay, grass, fodder, etc., grown on the place. The fertility of the soil will be maintained while the factory is in operation."

STAR POINTER is now the champion of the race-track, and has achieved enduring fame by beating the two-minute mark. At the Readville track, August 28th, against time, he paced a mile in 1:59¼, lowering the world's record by 1¼ seconds.

Star Pointer is a bay horse, sixteen hands high, weighing about 1,200 pounds. He was foaled in 1889, at Spring Hill, Tennessee, the property of H. H. Pointer. He was sired by Brown Hal, and his dam was Sweepstakes, the dam of Hal Pointer, 2:04½. He was sold when a colt to J. W. Titley, of Pennsylvania. When placed on the track he won nearly all his races, and soon became famous. Winter before last he was sold at auction to Smith & Mills, of Boston, for \$6,500; last winter he was put up at auction in Madison Square Garden, New York, and sold to James A. Murphy, of Chicago, for \$15,000. Before the season is over there will be a race between Star Pointer and the pacing stallion John R. Gentry, 2:00½, and an interesting contest it will be.

A sensation-maker on the track this year is Earthquake Pilot, a pacer without a pilot, owned by D. C. Langford, of Iowa. He has paced a mile in 2:08½ without a driver, and is a great attraction at county fairs.

UNDER date of August 28th "Bradstreet's" says:

"The general trade situation continues to improve, and aside from the unnecessarily prolonged strike of the soft-coal miners there is little in sight to cloud the outlook. The feature of the week is the advance in prices of almost all leading staples, beginning with an upward movement all along the line in iron and steel. Steel billets are now \$1.50 above lowest figures, bars \$1.50, rods \$3 and plates \$1. Bessemer pig-iron is up twenty-five cents and foundry a like amount. Southern irons are very strong on a continued active export movement. Where wire-mills have not advanced prices they have withdrawn quotations.

"Some western steel-mills are sold up to January 1st, which, with the demand for earlier deliveries from furnaces than had been arranged for, are quite significant. Lead, too, and soft coal are higher, as is wheat, notwithstanding one or two reactions. 'Bradstreet's' points out that the statistical position of wheat is the strongest known since the United States became a considerable exporter, and that its price, as well as that for bread, is likely to materially exceed the present week's advances. Following that for wheat, prices are higher for wheat-flour, for corn, oats, lard, potatoes, butter, eggs, beans, cheese, leaf tobacco, wool and live stock. Advances for leather, hides, lumber and linseed-oil are also reported.

"Cotton, which is up three sixteenths of a cent, reports the smallest world's stock for seven years past at this period, an improved tone and higher prices for the manufactured product. In spite of crop damage the tendency of estimates is toward the largest total yield on record, but with probabilities favoring much better prices than those obtained for the crop of 1894-95, the output of which was 9,873,000 bales.

"Advances are being also asked for reorders of woollen goods at mills, but print-cloths, petroleum and sugar are unchanged for the week, while pork is reported slightly lower than a week ago. No such general or pronounced upward movement of prices of nearly all leading staples has been witnessed within a week for many years."

WITH THE VANGUARD

In the September 1st number brief comment was made on the superior value of large, heavy seed. In a report on experiments with wheat just received from the Ontario Agricultural College it is stated that large, plump seed sown in the autumn of 1896 produced three and two thirds bushels an acre more than small, plump seed; six and four fifths bushels an acre more than shrunken seed; and forty-two and two thirds bushels an acre more than the seed which had been broken with the machine in threshing. The same number of winter-wheat grains were used in the different selections, and the experiment was conducted in duplicate. With dollar wheat the gain from selection of seed-wheat, according to size and weight of grains, counts up quite rapidly. In these experiments the gain paid well for the time and labor expended, and a good rate of interest on the value of the land besides.

The same bulletin records very satisfactory results in treating seed-wheat for the prevention of smut. It recommends as one of the cheapest and most effective preventives the hot-water treatment, which consists in immersing the seed-wheat for fifteen minutes in hot water, not allowing the temperature to fall below 130 nor rise above 135 degrees Fahrenheit. The treatment not only killed the smut-spores, but increased the yield of grain an acre.

PROGRESSIVE farmers and practical business men are coming to realize that the beet-sugar industry is a good thing. Within the past two months meetings have been held at many places for the purpose of discussing what is at the present time the most promising means of diversifying American agriculture. These meetings are popularly called in the West "sugar-beet rallies." No doubt much good has been done at these meetings, both in the way of disposing of some exaggerated notions about the industry and in giving correct information on the culture of beets, the manufacture of sugar and the probable profits from the business. It is a business in which farmer and manufacturer must work together in perfect harmony. The manufacture of sugar cannot be profitably conducted on a small scale. Capital must be

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NOTES ON RURAL AFFAIRS.

What Fertilizer to Use.

The fertilizer question is ever with us, and remains to be the question of all questions with farmers. A bulletin (No. 172), "Fertilizers on a Clay Soil," has just been issued by the Ohio experiment station. This bulletin gives an account of some tests made with various fertilizers on an old field of sterile, white clay in Cuyahoga county, in which field a five-year-rotation of corn, oats, wheat, clover and timothy has been started, the grain crops receiving different combinations of fertilizing materials. The reported facts in the case seem to be very suggestive, and I must take a more than passing notice of them. I think I have stated it repeatedly in these columns that with the present low grain prices, it is a hopeless task to grow cereals at a profit when we must do it by applying all the plant-foods needed for the manufacture of the crop. We cannot pay fifteen cents or more for nitrogen, and hope to get fair returns in grain for the outlay. In the results reported by the Ohio station, phosphoric acid has been the dominant factor in producing increase of crop, with nitrogen next in importance, while positive results from potash were rather in doubt.

* * *

The station says: "Phosphoric acid has been used at a profit when used alone, but the profit nearly or quite disappears when nitrogen or potash, either or both, are added in the quantities used on all plots in this test, except on two. On these plots not only are the quantities of nitrogen and potash reduced relatively to the phosphoric acid, but the nitrogen is used in a cheaper form, as it may be bought in tankage at about the same price a pound as phosphoric acid (five cents), whereas in nitrate of soda it costs fifteen cents, and in the ordinary ready-mixed commercial fertilizer it is sold to the farmer at twenty cents or more a pound."

Superphosphate alone, when used at the rate of 320 pounds an acre, and worth \$2.88, gave an increase of crop worth \$12.84. The barnyard manure plots have given an increase of the value of \$2.50 for each ton of manure used, with the hay crops yet to be heard from. In this compilation corn was counted at 33½ cents a

bnshel, oats at 25 cents, wheat at 66½ cents, and straw and clover at \$3.00 a ton. With wheat at present figures, and straw at \$5.00 or more a ton (the rate we usually realize or pay in this vicinity), the outcome would, of course, be that much more favorable.

* * *

A Good Home Mixture.

The station has used a mixture of 100 pounds tankage, 100 pounds acid phosphate and 10 pounds muriate of potash, and in every case this mixture has produced very satisfactory results. On some of the plots in these tests the mixture was applied at the rate of 420 pounds an acre, at a cost of \$3.75, and gave an increase value (at prices of grain already mentioned) of \$14.16. The station has this to say about the mixture:

"When purchased by the single 200-pound sackful, the cost of the materials for mixing this fertilizer amounts to \$18 or \$19 a ton, but it may be compounded at a cost of about \$16 a ton, inclusive of freight and cost of mixing, if the materials are bought for cash in car-load lots. Its analysis would be about as follows:

Ammonia 3 to 3½ per cent.
Phosphoric acid, 10 to 12 per cent.
Phosphoric acid, total, 12 to 14 per cent.
Potash 2 to 3 per cent.

"Ready-mixed fertilizers of equivalent composition are sold to farmers at \$25 to \$30 a ton.

* * *

"Slaughter-house tankage or equivalent material, such as fish refuse, is the basis of practically all the ready-mixed fertilizers sold in Ohio. As it comes from the great slaughter-houses of Kansas City, Omaha, Chicago and Cleveland, it contains from five to ten per cent ammonia and ten to twenty per cent phosphoric acid, which is in the form of a bone phosphate and is usually described as such. Thus, a seven-and-thirty tankage is sold as containing seven per cent ammonia, equivalent to five and seven tenths per cent nitrogen and thirty per cent bone phosphate, equivalent to thirteen and eight tenths per cent phosphoric acid, since phosphoric acid is found in bone phosphate combined with lime in about the proportion of forty-six per cent phosphoric acid to fifty-four per cent lime.

"As it comes from the slaughter-house ground tankage is a fine, dry powder, in condition to use in the fertilizer-drill, and its nitrogen and phosphoric acid are practically in the same condition in which they are found in raw bone-meal. It is sometimes used directly as a fertilizer without any addition; but experiments indicate that its effectiveness may be increased, or at least its action rendered more prompt, by mixing with it some acid phosphate. The acid phosphate acts quickly, starting a vigorous growth, which the slower-acting phosphoric acid of the tankage, together with its ammonia, will sustain. It is probable, also, that a small addition of potash will be found advantageous in most cases."

* * *

Advantages of Home Mixing.

The great saving that farmers can secure by doing their own mixing instead of buying the ready-made mixtures of fertilizer manufacturers has often been pointed out during the last two or three years; but it seems to me that the case has seldom been stated much stronger than is done by the Ohio station in the present bulletin. "According to our latest quotations," says the station, "a group of farmers who would buy a car-load of fifteen tons of tankage from Chicago, a similar car-load of acid phosphate from Baltimore or Philadelphia, and a ton and a half of muriate of potash from New York, and mix them at home, might save about \$300 in the transaction, as compared with the cost of the same quantity of fertilizers of identically the same original composition, if purchased through the dealers in ready-made fertilizers." It is true that this fertilizer is not very rich in nitrogen, but this element we can get in the full quantity required by means of growing clover in our regular rotation, and returning the second crop to the soil. Neither is the mixture rich in potash, and for some soils, especially of a sandy character, it may pay to use a larger proportion of muriate of potash.

* * *

Muriate of Potash and Ammonia Alkali.

It seems a pity that some of our respectable New England papers will allow a certain "manufacturing chemist" to air his fads about

potash and soda in a most remarkably persistent fashion, and incidentally print such gross perverseness of the plain facts. Why this persistent booming of "ammonia alkali," save for "grinding the ax?" From an article which I find in one prominent New England agricultural weekly, under the head of "Muriate of Potash," and in another a week later, under the head of "Starch Formation," I quote the following few sentences:

"It is well known by most of the agricultural chemists that potash in the form of muriate of potash, when applied as a fertilizer to the soil for potatoes, singly or mixed with other fertilizing constituents, checks the starch formation, and the potatoes grown are waxy instead of mealy. . . . Potash in the form of carbonate of potash costs too much to be used for agricultural purposes, but potash in the form of muriate of potash can be used to advantage, as in addition to the potash you have nitrogen in its most soluble form. As soda can be used as a substitute for potash, and is lower in price than potash, it can be used to great advantage in place of it in the form of nitrate of soda.

"If only a carbonate of soda is wanted it can be bought in its best form in soda-ash, called 'ammonia alkali,' from the process of its manufacture. Corn as well as potatoes contain a large quantity of starch, and the use of muriate of potash for this crop is as objectionable as it is for potatoes.

"On sweet corn for canning purposes or table use the difference in sweetness caused by the use of a muriate or a carbonate in fertilizing is very apparent, not only in its quality, but the quantity produced."

To all this I would say (1) that I have repeatedly used muriate of potash for potatoes and found them as mealy and of as good quality generally, and as good in yield, too, as potatoes grown side by side with them which had been fertilized with sulphate of potash. In fact, I never had drier, mealier potatoes than those grown on soil fertilized with muriate of potash. (2) I have made the same tests on sweet corn without being able to see the least difference in quality of the product. As a matter of fact, muriate of potash is used in many localities quite extensively for corn and potatoes. (3) It is not true that potash in the form of carbonate costs too much to be used for agricultural purposes. In the form of wood ashes, home-made as well as Canadian, carbonate of potash is being used quite extensively, and in many cases economically and profitably, as a general fertilizer. (4) I would like to know where we can buy potash in the form of nitrate (saltpeter) cheaply enough to justify us in using it for agricultural purposes. It is a highly concentrated fertilizer, furnishing both nitrogen and potash in their best forms, but the price ordinarily asked for the article puts it beyond our reach for economical uses. (5) We don't want "only a carbonate of soda," and have no use for soda-ash or "ammonia alkali." In short, our staple articles of plant-foods are those mentioned in the bulletin of the Ohio station (No. 172): namely, superphosphate (acid phosphate or dissolved rock), muriate of potash, and possibly tankage, with clover rotation.

T. GREINER.

SALIENT FARM NOTES.

Corn Fodder.

Most of the early-planted corn is now ready to be cut for fodder, and the sooner this is done after the grain begins to glaze, the better will be the quality of the feed. It is not always advisable to wait for the late plantings to get into cutting condition, especially if one is short of roughage, because a sudden change in the weather and an unexpected frost may ruin it in a night. Frosted corn fodder—that is, corn that is frosted before it was cut—is, as most feeders well know, of little value. Years ago a sagacious old farmer for whom I was working advised me to keep in mind the fact that one shock of September-cut corn is worth more for feed than two shocks cut later. "When you get to farming for yourself," said he, "cut your earliest corn for fodder, and you will do two things—get a good quality of feed, and avoid all loss from early frosts."

* * *

A good quality of fodder, that is, fodder cut when in the proper condition, makes a feed that is nearly as valuable in all respects as timothy hay. The shocks must not be made too large; they must be set up well and tied; and as soon as the fodder is thoroughly cured put it under cover.

Many old feeders contend that more than two handlings makes corn fodder cost more than it is worth. Their method is to put in large shocks containing 256 hills each, leave it in the field until wanted, then haul in and feed from the wagon. This will do very well if it is all fed out early. If it is allowed to stand in the field most of the winter, rats, mice and melting snows will reduce its value one half or two thirds.

In cutting corn for fodder I have always contended that it pays to cut high. There is nothing of value as feed in the lower twelve to twenty inches of the stalk, and it is far better to leave it in the field than to add its bulk and weight to the material to be handled. Some farmers object to leaving these long stubs in the field because they interfere with plowing. A corn-stalk cutter run over them will quickly settle that matter. Or if they are left until the ground freezes, a railroad iron or heavy pole will reduce them to splinters if drawn over them while they are frozen brittle.

* * *

Borers.

I have just been through my orchard gonging out borers. In some of the trees I found as high as five and six small ones, and in three trees I found five large ones. These three trees were almost ruined, the borers having tunneled almost entirely around them. The only way to get these pests out is to cut them out with a sharp-pointed, thin-bladed knife. If they have gone into the body of the tree, a piece of eighteen or nineteen wire will reach them. By prodding vigorously one can always get them, and the juice on the end of the wire will show when they are executed. When I find they have bored a tree very badly (which does not often happen, as I watch them pretty closely), I take a four to six inch drain-tile, according to the size of the tree, split it open lengthwise, fit it together again around the body of the tree and bind it with wire. I then fill it with fine soil, and keep it full for at least a year. Sometimes a hard freeze immediately after a rain in winter will shatter the tile, but if it is not bound too tightly this will not happen. Packed in earth in this manner all wounds on the tree heal over and leave scarcely a trace. Occasionally fine roots will start out about the edges of the wounds, but these wither when the tile is removed. By this method I have healed many trees that were barked nearly half way around by rabbits. Go through the orchard now and examine the base of every tree. Don't allow a single borer to winter in them.

* * *

Time to Buy Clover-seed.

It is a right good time to buy clover-seed. Some of your neighbors will cut a crop that will be reasonably free from foul weed-seeds, and they are the men to buy seed from. If this matter is put off until the seed is wanted for sowing, nine times in ten you will have to take anything offered, and more than likely get something mixed with it that you did not bargain for. Buy your clover-seed right at the huller if possible; it will cost less than at the stores, and besides you will know what you are buying.

* * *

Incubator.

If one is contemplating buying an incubator for next season's work now is the time to do it. Early spring chicken is just as good eating for farmers as for city people, and in order to have lots of them it is necessary to have an incubator. When the price of eggs comes tumbling down to five or eight cents a dozen, one feels like it is about time to be converting them into chickens; but it generally happens that just then all of the hens are too busy laying to turn their attention to incubation, and so the eggs have to be sent to market and the prospect for early spring fry vanishes.

If one possesses an incubator and knows how to operate it, he is independent of the whims of the old hen. He can get out a bunch of chicks in time to meet the first spears of green grass and young chickweed, and to get the full benefit of the warm, sunshiny days of early spring-time. Chicks hatched at that time will, if properly cared for, grow like weeds; and if their owner has a tooth that is particularly fond of masticating young chicken, that tooth can be gratified, even before green peas are ready for picking.

FRED GRUNDY.

Our Farm.

FARM THEORY AND PRACTICE.

SETTING FRUIT-TREES.—The Fourth of July orator tells us farmers that we live upon the best of the land, and we become puffed up, while our wives know all the time that through carelessness there is no such full provision of choice articles of food on our farms as has been pictured to us. By "us" I mean that large class of farmers that is not engaged in fruit-growing for market, but depends upon grain, or potatoes, or hay, or cows or other live stock, for income. All these farmers know that an abundance of choice fruit-trees is a pleasant thing to have, but it takes several years after the planting to secure the fruit, and there is continued neglect. Autumn is a favorable time for setting trees, and I prefer it to the spring. Every farmer should make it an invariable rule to set a few trees—two or three may do—every fall, and these should be some choice varieties that have come to his notice during the year, and that should be added to his short list of varieties of fruit for home use. Many choice varieties are short-lived, and it is desirable that a new tree of each be planted every few years. The young trees cost only a trifle, and time goes so fast in this world that they come into bearing before one realizes that it is time for them. Their care is a pleasure when one knows that he has the best varieties and that he is preparing a feast for himself and his friends. To my notion there is no greater satisfaction in farming than in plucking and eating fresh the fruit that is borne by trees of one's own planting. The trees may occupy land that would otherwise bring in very little income, and some varieties, like plums and dwarf pears, may be closely grouped together. Twenty or thirty trees in all, including every needed variety, may be all that is desired for the family, but these should be near every farm home, the young trees coming on continually to replace older trees or less desirable varieties, and the older trees should be removed as soon as they fail to be satisfactory in any way. There is very little work and very slight expense in all this, and by such means we make our country life more delightful.

A SUGGESTION ABOUT VARIETIES.—I do not believe in unqualified condemnation of the tree agent. Probably there is much unjust criticism indulged in, and we do know that there are honorable agents as well as dishonest ones. But so far as this family orchard is concerned let the agent and his beautiful pictures alone, except when he offers you a variety that you have on your list of desirable ones for your purpose. He may know the popular varieties and the ones that are creating the most stir among fruit-growers, but they are after showy fruit that bears handling well, and you want the most palatable and do not care about its shipping qualities or any showy appearance that is at the expense of quality. The agent is not the man to select the few trees you set each year. Very few varieties of fruit succeed everywhere. There should be a succession in time of ripening, and some horticultural friend in the community is the best authority as to the most desirable variety of apple or plum or other fruit, for "nicking in" between two varieties that are already in the orchard. In the case of some fruits, especially apples, grafting is the best dependence for getting varieties wanted. Scions can be taken from trees whose fruit exactly suits, no matter whether the name is known with certainty or not, and then there is no mistake and no disappointment when the tree comes into bearing. My farmer friend, if you have no kitchen orchard excepting a few old apple-trees, turn over a new leaf this fall by setting out a few trees each of summer and fall apples, dwarf pears, choice plums and cherries, and other fruit that may do well, and then solemnly promise yourself and wife that you will add one or two or three new trees to the little collection every year. Such a little orchard helps to give zest to life and makes the children want to come back to the old farm. It pays a hundred per cent on the investment every year, regardless of the money per capita in this country, the purchasing power of silver or the altitude of the tariff.

WINTER COVERING FOR LAND.—Soil grows poorer when it is left bare, and

gains in fertility when it is covered. I do not believe that it is necessary to have many "patches" of ground near a farm home, but when it is not practicable to have a rotation, including some kind of a sod, in garden and truck-patch, this ground that would otherwise be bare during the winter should be seeded to crimson clover or rye as fast as crops are removed. The clover often fails, for various reasons, but in rye we have a hardy plant that makes a catch easily, may be sown any time from August to the first of November, as the removal of crops permit, and that not only saves the soluble plant-food that is in the soil, but also adds humus and improves the mechanical condition of the ground. Rye should be sown freely on all ground that would otherwise lie bare. If

	Organic Matter. Pounds.	Digestible Elements.			Fuel Value in Heat Units. Calories.
		Protein. Pounds.	Carbo-hydrates. Pounds.	Fat. Pounds.	
Horses, moderately worked.....	22.5	1.8	11.2	.60	26,712
heavily worked.....	25.5	2.8	13.4	.80	33,508
Milk-cows.....	24.0	2.5	12.5	.40	29,590
Sheep.....	20.0	1.2	10.3	.20	22,235
Hogs.....	31.0	4.0	20.0	1.00	50,000

sown early in the fall, it makes a good sod before the first dry days of spring, and can be turned under with profit. If stable manure is used, it may be drawn upon the ground in a raw state before winter, and as it leaches the rye roots take up the plant-food. Rye is a hearty feeder, making use of elements that are not in shape for some other classes of plants. Then, if the rye sod is broken early, the structure of top and root is soon broken down, and the fertility is ready for the garden crop. Market gardeners want only fermented manures, but the farmer can enrich his truck-patches with less loss of plant-food and less expense by drawing manure direct from the stable to a rye sod in the fall than in any other way. In any event, the ground should be covered with such a green crop whenever it will not interfere with early planting.

RYE SOD AND POTATO-SCAB.—Two years ago I was told by a practical farmer that a rye sod would prevent the scabbing of potatoes. I confess that I had little faith in this preventive, seeing no reason why it should be so. We know that by the use of corrosive sublimate we can kill the scab germs on the seed, but the

turned under early in the spring, and the experiment is given only for what it is worth. Something has limited this disease in this field, and it may be the effect of a decaying rye sod. DAVID.

COMPOSITION OF FOODS.

Each animal has characteristics peculiar to itself, and no iron-clad rule can be laid down applicable to all cases, yet certain standards have been established as a basis for operations. The German chemist Wolff has long been a recognized authority on this subject, and his standards are to-day more largely used than all others combined. The daily rations for each one thousand pounds of live weight he gives in the following tables:

As a rule dairymen will feed rations far higher than the one given above in fats and frequently much lower in protein. Of one hundred and twenty-eight rations collected and analyzed in Wisconsin the average was 24.51 pounds of dry matter, 2.15 pounds of digestible protein, 13.27 pounds of carbohydrates and .74 pounds of digestible fat. The averages in Connecticut were much higher throughout, and especially in fat, which was .94 more than twice the amount necessary, unless the cows were unsheltered.

A great number of persons fail to understand what is meant by the "nutritive ratio." This term is applied to the ratio which the protein bears to two and one fourth times the fats plus the total carbohydrates. Thus in the standard for milk-cows there is .4 pounds of fat, which multiplied by two and one fourth equals .9, which added to the carbohydrates equals 13.40; this divided by 2.5 equals 5.3. So we say this has a ratio of 1 to 5.3, and it is believed the dairy animals fed in this ratio will give the best returns for the amount of food they consume.

Inasmuch as the protein may be transformed into either fat or energy, it may

FOR PASTURE OR SOILING.

Variety. 100 pounds.	Dry Matter. Pounds.	Protein. Pounds.	Carbo-hydrates. Pounds.	Fat. Pounds.	Fuel Value. Calories.
Kentucky Blue-grass.....	35	3.0	20	.8	46,000
Timothy.....	38	2.3	24	.8	52,000
Red Clover.....	29	3.1	15	.7	36,000
Alfalfa.....	28	3.9	11	.4	30,000
Orchard-grass.....	27	1.9	16	.6	36,000
Corn Fodder.....	21	1.1	12	.4	26,000

CURED HAY OR FODDER.

Red Clover.....	85	6.6	35	1.7	85,000
Alsike Clover.....	90	8.2	42	1.4	98,000
Alfalfa.....	92	10.6	37	1.2	95,000
Timothy.....	87	2.9	44	1.4	95,000
Corn Fodder (stalk and grain).....	58	2.5	33	1.2	72,000
Corn Stover (without ears).....	60	2.0	33	.6	68,000
Oat-straw.....	91	1.6	42	.7	86,000
Wheat-straw.....	90	.8	38	.5	74,000

MILL PRODUCTS.

Corn-meal.....	85	7.0	65	3.3	148,000
Corn-and-cob Meal.....	85	6.4	56	2.8	129,000
Oatmeal.....	92	11.5	52	6.0	145,000
Pea-meal.....	90	16.8	52	.7	130,000
Wheat-bran.....	88	12.0	41	2.9	111,000
Wheat-middlings.....	84	12.8	53	3.4	137,000
Rye-bran.....	88	11.5	50	2.0	123,000
Gluten-meal.....	91	25.0	42	10.4	170,000
Linseed-meal.....	91	29.0	33	7.0	144,000
Cotton-seed Meal.....	92	37.0	17	12.6	153,000

trouble is that when the germs are already in the soil this treatment is not effective. For two years I have been testing a rye sod—that is, rye turned under in the spring—as a preventive, and it certainly seems to have some effect. The ground was too full of the germs to make it safe for potato-growing, but was rich, and so the rye was turned under in the spring of 1896, and the crop of potatoes raised on this ground was reasonably clean. Rye was again sown last fall, and another test was made this season on this small field. Both springs I let the rye get six inches high, thus giving a considerable amount of green matter to turn under. The theory in the experiment is that the rye produces a sufficiently acid condition of the soil to make it unfavorable for the scab germs. We do know that this disease spreads only in sweet soils. I do not say that I yet have a great deal of faith in this "cure," as it hardly seems that the rye would produce such an effect when

to a certain extent take the place of either fats or carbohydrates, should there be a deficiency of one or both of these; but since neither the fats nor carbohydrates can fill the place of the protein, we should, as a rule, endeavor to give food possessing an abundance of protein. But an analysis of the rations fed on the average farm will usually show that there is a deficiency of protein rather than a surplus.

It has been demonstrated by a large number of tests made in the state of New York that dairymen do succeed even when deviating considerably from the standard ratio, but it has also been demonstrated that in such cases the dairymen have been exceptionally careful in other respects, and there is little room to doubt that if they adopted a standard ration they would succeed even better.

Tables have been published at various times in recent years showing the compo-

sition of various feeds, but as these tables are not so widely circulated as they should be, we append a table which will include those feeds considered the best and those most generally obtainable. These feeds should be combined in such a way as to make use of them in the proportion they are possessed or obtainable, considering their value, and at the same time the combination should approximate the required standard. JOHN L. SHAWVER.

IMPROVEMENT IN LIVE-STOCK VALUES.

Owners of live stock have been discouraged, as a rule, during the past five years. Horses and sheep have been for immediate returns very poor property. Cattle and hogs have at times been valuable, but they too often have afforded no encouraging returns. The signs of the times are changing, and there is now outlook for at least a moderate improvement in all classes of live stock.

There is steady improvement in manufacturing business, and with the increase in such work there will be a greatly improved demand for good horses. As the income of salaried people and wage-workers is advanced, the grocers and other retail merchants will be obliged to have more of the average-sized horses for use on delivery-wagons. This will afford a market to many farmers for their average horses, and there will be a tendency continually among breeders, with advancing values, to produce a better grade of stock for the future. As values of all the different grades of equine stock improve there will be a much better feeling among the general farmers which will cause them to invest in much-needed new implements and machinery.

It is usually necessary on the average farm to depend upon such products as the meats, butter, eggs, wool, etc., for the current expenses and living of the family. Permanent improvements must be made, as a rule, from the returns of the occasional sale of a team or a single horse.

With the increasing value of all kinds of grain there is every reason to expect an advance in the prices offered for all grades of live stock. There has been a greatly diminished condition of the flocks of the country, so that the fleeces will not glut the near future. The disposition of so many people to economize in clothing during later years will necessarily, of course, force the masses to buy more freely in the near future. This urgent demand will advance values materially. With the masses of working people employed also, there will be a steady advance in the demand for meats and the greater variety of provisions. When families increase their expenditures for the table there will be a sure and steady call for more of the farmers' products.

It is generally claimed that the supply of hogs throughout the country is less than for some years hitherto. The markets at the yards indicate an upward tendency, so that producers of pork may take courage to give much better care to the swine than they were disposed to do of late because of low values.

It must be remembered that with improving times and values in their products the farmers themselves will be disposed to use more freely better foods for their tables and more of their best products generally, because of the fact that an increase in their incomes will permit more liberal living. In too many cases during panic times some farmers felt themselves compelled to use for their own provisions largely the products which were perishable and to some extent unsalable. A slight improvement all along the line should give courage for renewed effort. Everything produced on the farm has now enough worth to warrant the owners in giving it the best care and attention. M. A. R.

Good Appetite

And Strength Given by the One True Blood Purifier.

"I was all run down in health and had no appetite. I have taken a number of bottles of Hood's Sarsaparilla, and my appetite has returned. Hood's Sarsaparilla has made me strong and well, and I recommend it to all who are in a run down condition." C. L. MURPHY, 218 Franklin Street, Marietta, Ohio. Remember

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Our Farm.

NOTES FROM GARDEN AND FIELD.

PARIS GREEN IN SOLUTION.—The season is now too far advanced for convenient experiments in spraying for insects. The only thing that can now be done is to study the question in its economic relations. That Paris green dissolves fully and freely in ammonia, and that this solution can be diluted with water so as to have a perfect, weak solution and be safely sprayed on vines of all or most kinds, seems to me settled facts. But I am not yet sure about the points of expense and effectiveness. The former, that of expense, I will shortly settle to my own satisfaction; but so far as the exact degree of effectiveness is concerned, I am afraid that it will take another season to allow us to come to definite conclusions. Possibly other parties have experimented with dissolved Paris green, and if so, I greatly desire to hear from them. It seems to be a matter of some importance. Even the best of our automatic agitators fail to keep the liquid in sufficiently violent motion to prevent a great deal of the Paris green settling to the bottom, and herein I think we will find the chief cause of indifferent results obtained from spraying with Paris green water. My honest belief is that even a lighter spraying given with the dissolved Paris green in weak dilution will prove as effective in destroying leaf-eating insects, etc., as heavier doses of Paris green simply suspended in water.

GREENHOUSE SOIL.—The season of outdoor operations will soon be over, and it is now too soon to get the greenhouse benches in working order. A thorough house-cleaning at this time should not be omitted. We remove all soil, etc., from the benches, clean up everything nicely, and before starting up again for winter, give a thorough fumigating by burning sulphur in the tightly closed house. This is for the purpose of destroying all the germs of diseases that may be present. I am not sure but that a repetition of this procedure, after the new soil is put on the benches and before seed is sown or plants started, may be of material help in keeping the diseases of forced crops out or under control. Not having tried it, I can only recommend it for trial. Now again comes the question of preparing the soil. No doubt that soil made from rotted sods, properly enriched with old rotted manure, sand, etc., as may be needed, cannot easily be improved upon. A new material, "Jadoo fiber," has been largely advertised. Of course I got a quantity of it for testing. It looks much like a coarse but rich peat. It is too coarse to be used in the form as it comes from the people who boom it, and should be fined in some way or mixed with fine soil and sand before it will be in condition for growing forced crops. But even then, its cost (about \$30 or more a ton) puts it out of reach for profitable use in growing ordinary vegetable crops. I am trying it on a limited scale only, and prefer to use my old mixture—well-rotted stock-yard manure, muck, some ordinary garden-loam containing a fair proportion of clay and sand; this mixture is about as good as anything I know of for greenhouse lettuce, radishes, cucumbers, etc. For vegetable-plants to be gotten ready for spring setting later on, I think the soil made almost entirely of rotted sands, with a moderate admixture of rotted manure, will be about the best.

STARTING GREENHOUSE CROPS.—We like to have some good lettuce in the fall, especially during November, and then again toward the holidays. At those times this vegetable seems to taste especially good, and is usually in good demand. I have plants already up, and shall sow more seed at intervals, so as to be able to keep the benches full at all times from now on. And if we want a few tomatoes for winter we can start plants from cuttings at once, and set them on the benches, either in large boxes or directly on the bench soil. The variety we have heretofore thought superior to all others for this purpose is the Lorillard, but possibly we have a better one in the Mills; and this I shall try now to some extent. Another new tomato, which seems to have valuable points, is an early "Ideal," especially for the South, of which I shall speak later.

T. GREINER.

ORCHARD AND SMALL FRUITS.

CONDUCTED BY SAMUEL B. GREEN.

JAPANESE PLUMS.

From a recent bulletin of the Cornell experiment station we take the following notes on plums. These notes are by Professor L. H. Bailey and S. D. Willard, and are the result of most careful study:

In respect to hardiness of the different types of plums it may be said that at Cornell the Japanese and domestica varieties are about equally resistant to cold. Neither of them bore fruit last year, but the winter of 1895-96 was one of very unusual severity. Although the Americanas are so very hardy, we do not recommend them for market cultivation in western New York because they are inferior to the domesticas, and the years are very seldom in which the domesticas are injured seriously by cold.

The leading type of plum for western New York will no doubt always be the domesticas. The Japanese varieties are important because they add variety to the list, and especially because they are rich in very early kinds, and the fruit is so firm that it carries well; aside from this, the trees are vigorous and very productive, and they are less liable to the attacks of the black-knot and the shot-hole fungus than the domesticas are.

JAPANESE PLUMS.

ABUNDANCE.—A variety of the Japanese plum which I have now been fruiting for eight or nine years. I regard it as one of the best of several of the family that I have tested and so well known as to need no description. Quality good and productive; tree hardy and vigorous, but in no sense equal in my estimation to the next.

BURBANK.—A variety sent out by Mr. Luther Burbank, of Santa Rosa, Cal., and well described in Bulletin No. 106 of the Cornell experiment station. The tree is very hardy and vigorous, but the most sprawling in its habits of growth of any plum I have ever cultivated. As regards productiveness it is unequaled by any plum I have ever fruited. To produce the finest fruit heavy trimming should be practiced. The quality is excellent, and it is destined to become one of the most popular of all plums for canning, while its attractive color, good quality and shipping properties will cause it to be sought for as a market variety. It ripens ten days to two weeks later than Abundance. I have had it in fine condition the last week in August and early in September.

KELSEY.—This variety has winter-killed to such an extent that I abandoned any effort to fruit it, and am sure if the variety obtained was true to name that it cannot be grown as an orchard tree at this place. [We still hear of the Kelsey being fruited in New York, but in every case which we have investigated some other Japanese variety has been misnamed the Kelsey. The farthest north which I have ever known the true Kelsey to fruit is southern Delaware.—L. H. B.]

OGON.—Medium to large; color lemon yellow; flesh firm and a good shipper; perfect freestone; quality poor; inclined to drop badly before mature, and is only a fair producer. I see no reason why it should be planted in the commercial orchard, but it is a good canner. Have had it in fruit for several years.

TRUE SWEET BOTAN.—Received from J. C. Normand, of Marksville, La. It closely resembles the Abundance in wood and fruit, and yet it seems inclined to ripen a few days earlier; of better quality and apt to take on a brighter red color; hardy and productive.

WILLARD.—This variety, with several others, was obtained in a lot of scions obtained in California several years since, and in which I became specially interested because of its vigorous habit and hardiness. Size medium; color red and attractive; productive; very early, frequently ripening by the fifteenth to the twentieth of July, and when picked early will keep a long time in good condition, with no disposition to decay. Quality poor; indeed, as compared with others, I regard it as inferior.

YELLOW JAPAN.—This variety was obtained of Mr. Normand, and I understand has also been disseminated under the name of the Chase. Fruit not quite equal to Burbank in point of size as grown in close proximity on my grounds. Color of skin not quite so dark. Quality good; habit of growth upright; foliage not so strong, and in my opinion the tree might not endure as

low a temperature without injury as the Burbank. It ripens considerably later, and is more variable in its habits. The fruit has been much larger and of better quality and color some seasons than others upon the same trees; hence, I have been led to infer that it is scarcely as reliable as Burbank. [This is the Chase of my Bulletin No. 106, and that name should be preferred.—L. H. B.]

WHITEWASH FOR SCALE.

A Tennessee correspondent refers to Mr. Saunders' note in regard to the destruction of scale by lime-wash, and remarks that he practiced it successfully a half century ago, adding, however, a little soot with the lime-wash in order to take away its glaring color. It has also been in use by the old German settlers of Pennsylvania for a couple of centuries, who applied it not merely for the destruction of scale, but for all other insects and injurious fungus. No trees can be healthier than those old-fashioned people can present. No one need fear the San Jose scale, or any other scale, who applies annually a coat of whitewash as described. So many of these admirable horticultural practices of our forefathers have been suffered to fall into disuse to be replaced by other more complicated and less satisfactory applications that correspond. Like Mr. Saunders, those who bring these old, worthy practices again to the foreground deserve more thanks than those who are continually talking of new notions.—Meehans' Monthly.

CULTIVATING FRUIT-TREES.

Fruit-trees in cultivated lands suffer much less from drought and winds than those in sod. The fruit is larger and better. An examination of the soil in Nebraska showed that for every one hundred barrels of water in the first twenty inches of sod there were one hundred and forty barrels in cultivated land. It is not practicable to apply a mulch of straw or other material, but the other few inches of soil when kept light and shallow serve as a mulch for all below.—American Agriculturist.

INQUIRIES ANSWERED.

Grape Cuttings.—A. E. B., Elyria, O. Better draw earth up around the rooted cuttings this fall and let them stand where they are until next spring, when they should be removed to a permanent location. Plant eight feet apart in rows eight feet apart, unless soil is very rich, when they should have at least two feet more in the row.

Cider from Windfall Apples.—J. W., Canon City, Col. You cannot make good cider or vinegar from Ben Davis or other very green apple windfalls, or as a rule from early apples, for they do not contain enough sugar to form the alcohol which must be present in good cider and which must first be formed before the cider can become good vinegar. Ben Davis windfalls at this season are practically worthless, but should be destroyed if they are wormy. However, if some sugar is added to cider from early apples it is much improved in quality and will make good vinegar. For the best cider or vinegar ripe, rich apples are most desirable.

Paris Green for Leaf-eating Insects—Wash for Trees.—E. D. J., Pittsburg, Pa. Paris green and water, used at the rate of about one pound to one hundred and fifty gallons of water, is perhaps the simplest and best remedy for all insects that eat the leaves of shade and fruit trees. It is liable to injure the leaves of plum, peach and other stone-fruit trees, and should be used on them only with great caution; but as a rule it will not injure them if as much stone-lime is added as Paris green. If, however, lime is used with the Paris green, not over one hundred and ten gallons of water should be used to a pound of Paris green. Paris green, you understand, will not destroy sucking insects, such as lice and leaf-hoppers.—As a wash for trees I know of none better than whitewash, which can be darkened by soot if desirable.

Grape Wine.—J. F. F., Concordia, N. C. Wines that will keep cannot be made without adding sugar, as the sugar forms alcohol that is necessary for good-keeping qualities in the wine; but if the grapes are well ripened much less sugar will be needed than if they are not in the best condition, as well-ripened grapes contain considerable sugar. There is no use making wine unless you can make it of good quality, and no "hard and fast" rules can be laid down to accomplish this; much depends on the kind and quality of the grapes and other matters, which would require too much space to discuss. I refer you to the Bushberg catalogue, published by Bush & Son & Meissner, Bushberg, Mo., price 50 cents, which discusses this and all other matters pertaining to grape-growing, and should be in the hands of every grape-grower.

Time to Set Out Berry-plants and Vines.—P. W., Wheelersburg, O. Red raspberries may be set safely in the fall after October 1st. Blackcap raspberries had better be set in the spring if tip-layers are used; but if transplanted one-year tips are used, they may be safely planted at same time as red raspberries. Strawberry-plants should be set out at once, using great care in transplanting, if you wish to set this year, and they will produce a small crop next year. If set out late in autumn they do not get strong enough to bear much fruit the following season. Grape-vines are quite liable to winter injury if set out in autumn, and spring is the best time; however, if laid on the ground and covered with earth, they would probably come through the winter all right. But there is always some risk even in southern Ohio in autumn-planting of grapes.

Entomosporium—Anthracnose.—J. W. T., Ticonderoga, N. Y. The pear leaves received are affected with a fungus known as entomosporium; it also causes pears to scab and crack. It is injurious to quince also. However, it yields readily to treatment with Bordeaux mixture, which should be applied as soon as the leaves commence to unfold and at intervals of about two or three weeks during this season.—Your blackcap raspberries are undoubtedly injured by what is known as cane-rust, or anthracnose. If you will take the pains to examine the canes of this year's growth, you will probably find purplish hard spots, often of large size and perhaps involving the whole cane for some distance. This disease is common all over the country, and is especially severe in moist summers. It is much more injurious in the eastern than in the western states. The disease is not often very injurious the first year, and the affected canes grow pretty nearly as well as those perfectly healthy; but the second season, especially if the weather is unfavorable, the disease spreads, and often destroys the cane before the fruit ripens. This has been found a difficult disease to control, and but few growers attempt to do so, but I believe if a new plantation is sprayed with Bordeaux mixture from the start that the disease can be kept from being seriously injurious. In spraying to prevent this disease aim to spray the canes and not the foliage, commencing when the canes are one foot high; and experiment with the strength of the Bordeaux mixture, so as to be sure and not get it strong enough to burn the leaves of the young plants. Also spray the canes, before the leaves unfold, with a solution of sulphate of copper, one pound to fifteen gallons of water. Some varieties are more liable to injury from this disease than others. Also in a good dry situation, in well-cultivated land, it is less injurious than in moist valleys or shut-in locations.

"ELI" BALING PRESSES.

The standard press made by the Collins Plow Company, of Quincy, Ill., is the "Eli" continuous-travel press. This machine has won high praise, and it was among the interesting objects in that section of the world's fair at Chicago, where "Eli" presses won the highest award of merit. They are distinguished for their rapid work, the conversion of immense power, and many mechanical improvements. Information and illustrations of the largest line of baling presses in the country will be sent on request, by the Collins Plow Company, 1167 Hampshire street, Quincy, Ill.

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Our Farm.

SCIENCE AND AGRICULTURE.

HERE has been held recently in the city of Detroit a series of important meetings. This series included the annual convention of the American Association for the Advancement of Science, that of the Society for the Promotion of Agricultural Science, and the American Association of Economic Entomologists. These national organizations received a cordial welcome at the hands of the citizens of Detroit, and the sentiment was well voiced by Mayor Mayberry and ex-Senator Thomas W. Palmer. Among other things the latter said that amid the general scramble for money, place and power which characterizes the present age, it was gratifying to know that there is an increasing number of men and women who are devoting themselves to the pursuit of truth.

Formerly it was considered that there was a conflict between science and religion. Let us hope that that day has long been passed and that the more enlightened public recognizes that religion has to do with the spiritual nature of man and science with physical phenomena.

"What is science?" I have asked the question of many, but have never received a satisfactory answer. Herbert Spencer defines it as the extension of our perceptions by means of reasoning; but he admits that that is not a full definition. I would define science as "the classification of phenomena to the end that principles may be established and declared, from which may be deduced rules of action that shall be applicable to particular cases." "How did science originate?" By extended observations, experience and comparison. The first man who gave a formula for scientific methods was Aristotle, when he declared that "all reasoning must be based on facts." Science is like the blessings of heaven—her benefits fall upon the just and the unjust. She has lifted the poor to comfort and taught the rules of correct living. She has manacled pestilence that stalketh at noonday, and strangled the afrit of the sewer. She has declared the laws of sanitation so that he who runs may read. What her future will be no man can foretell, but we know that it will accumulate untold blessings upon the race.

"Wheat Consumption in the United States" was the subject of an address by Prof. Henry Farquhar, of the Department of Agriculture. There is a great difference in the wheat consumed by different nations. France leads with eight bushels for each inhabitant, while Scandinavia and Russia are at the other extreme with from one to one and one half bushels. Great Britain stands next to France, with an average consumption of from five and one half to a little over six bushels per capita. In Canada and Australia the amount is reported very variously, being somewhere near that of Great Britain. In the United States there is great difficulty in collecting data, but the best statistics obtainable show that it is somewhere between five and one third and five and one half bushels per annum for each inhabitant.

Prof. R. C. Kedzie, of the Agricultural College, Lansing, Mich., offered some contributions to methods of testing flour. He said in part: "Michigan millers ask for some method of testing winter-wheat flours applicable for commercial uses. The most natural test is by baking into bread, but this is too slow for commercial purposes, and too much dependent upon the skill of the baker. Doughing the flour and washing out the gluten is also too slow, and in this no account is taken of soluble albumen. The method of testing must eliminate the personal equation and give comparable, numerical results. It must also be rapid and easily used by persons of ordinary skill.

"The testing must also take account of the amount of water absorbed by the flour; the strength or viscosity of the dough, the color of the surface when moistened, and also when dried. In making the test a dough is made composed of one part water to two parts of flour. The strength is determined by the viscometer, by which the resistance of the dough to being forced through an aperture by a constant force is noted, as the resistance to a steel cylinder pressing upon the dough in a tube having an opening one fourth of an inch in diameter.

"Tested in this way the 'patent' flour shows less strength than the 'straight.' It is better for pastry and the latter for bread."

"Progress in Agricultural Chemistry" was the subject of an address by Dr. H. W. Wiley, of the Department of Agriculture, Washington, D. C. He stated that it would not be long before the farmer might apply to the laboratory for particular nitrifying ferments to be applied to the soil where it is needed. The most marked progress has been made along the line of the inoculation of seed and soil with nitrifying ferments, and the results of the experiments are sufficiently encouraging to warrant the belief that much good may yet come to agriculture by following out this line of investigation.

Dr. Salfeld, of Hanover, spread upon a peaty soil, which was almost barren, a quantity of soil in which beans, peas and other leguminous crops had been grown. This gave excellent results. Many peaty soils are so deficient in the bacterium which develops nodules on leguminous plants that it requires inoculation with other soils containing it before leguminous crops can be raised.

The commercial name of the preparation to be used for thus fertilizing the soil is "nitratine." This is sometimes used directly on the seeds which are to be sown, which on germinating develop rootlets on which the organisms grow. The best method, however, of applying "nitratine" is to first introduce it in a sufficient quantity of moist earth, which is subsequently stirred from time to time until the organisms have had time to multiply and distribute themselves in great numbers throughout the entire mass. This mass is then applied direct to the field, either by sowing broadcast, or in ordinary drills used in the distribution of fertilizers.

The seeding of the soil with appropriate nitrifying ferments is certain to become as much of an exact science as the use of the proper ferments in making bread or in the manufacture of butter and cheese, in the growing and fermentation of tobacco, and in other commercial operations where the activity of bacteria condition the character and value of the product.

In some notes "Upon the Annual Growth of Timber," Prof. W. R. Lazenby stated that on the farm of the Ohio State University the timber trees that made the most rapid growth were the following named in order: Yellow locust, catalpa (speciosa), black cherry, white ash, black walnut. He regarded the first two as the most valuable in the way of quick returns.

The growing of forest trees and the preservation, improvement and extension of existing woodland is a matter of signal importance to every citizen. The rapid, and oftentimes reckless, destruction of our timber trees, without any effort to restore the loss, is compelling those who come after us to pay for necessary wood and lumber many times the cost at which we might and should have grown it.

This improvidence is beginning to seriously affect our economic conditions. Perhaps we are not justified in saying that our climate has materially changed during the last fifty years. Possibly the average annual rainfall of the different states of the Union is about the same as it was one half century ago. Be this as it may, we are certain that our springs are failing, our creeks and rivers are becoming more and more irregular in their flow, floods are more common and droughts appear to be more frequent, more severe and more protracted. It can be laid down as a general proposition that no tiller of the soil has any moral right to cultivate more ground than he can maintain or increase the fertility of.

As an economic question it is fairly demonstrated that in proportion as the soil degenerates the struggle is against the cultivator. He who continues to work "run-down," exhausted or infertile soil is hopelessly handicapped and cannot compete with the man who tills more fertile acres.

Perhaps we are not yet justified in urging the planting of forest trees for the vague and not well-understood general climatic effect that they may produce, but we certainly are justified in urging forest-tree planting for certain specific purposes. These may be enumerated as follows: (1) For timber, (2) for shelter and protection, and (3) for ornament.

For the first purpose much rough and rugged land, many ravines and steep hillsides, in fact, every acre where trees will grow, that cannot be profitably plowed,

or is cultivated at a loss, should be re-clothed and devoted henceforth and forever to our most valuable varieties of timber trees.

For the purpose of shelter belts of trees should be planted wherever buildings, stock-yards, orchards, gardens, etc., are exposed to cold, sweeping winds.

Under the general head of protection, the banks of streams, ponds, open ditches, etc., may often be so planted with trees that they will be safe from disastrous washings by floods and rapid currents.

Dr. Orton and other eminent geologists make the statement that all soil is on its way to the ocean. Where the surface is level the march of the soil is slow, almost imperceptible, but on all declivities the transfer from higher to lower levels by the rain and melted snows is obvious to all. This is especially the case where the soil is free from vegetation. If covered with trees the washing is but slight.

For whatever purpose it may be planted and grown, we should never forget that a good tree, one that has some exchangeable value, will grow just as thriftily and surely as a poor one. The growing of forest trees is like the production of any other farm crop. Arboriculture, or forestry, is a branch of farming, and is subject to the same laws that govern the growth of other crops. For example, we do not number our grain-fields, orchards and gardens with inferior varieties of grain, fruit or vegetables. It is bad economy. We try to raise the best. It is equally bad economy to allow dogwood, alder, red elm, black oak or other comparatively poor varieties to grow where yellow locust, white ash, hickory, black walnut, catalpa or some other valuable variety can be grown with equal facility. We should see to it that each acre we control produces its best-paying crop, and that no acre becomes the poorer or remains useless.

WILLIAM R. LAZENBY.

EXTRACTS FROM CORRESPONDENCE.

FROM CALIFORNIA.—California is a state of which one is likely to form erroneous ideas if he believes all that he reads about it. There are many favored localities in the southern part of the state especially, and here, if one has plenty of money, he is likely to succeed. The soil is rich, the climate superb, but land is very high. There are some places here where a man can get land by making a small payment and wait until the fruit comes into bearing before paying for the land. Now, however, fruit is worth so little it is not safe to enter into such an arrangement. Orchards must be plowed and kept in as fine condition as a garden, the fruit must be sprayed or sulphured; picking, boxes and packing paid for, commission men and freight charges paid, leaving a very small profit, if any, when the returns come in. There is work to be had on the grain-ranches and orchards, but it is not long in one place, and a man may have to go some distance from home to obtain work, and the life is not an easy one. The climate is delightful in the coast counties, but in the interior the heat is extreme, and the north winds we have here, and some of the other northern counties, are terrible. In growing grain the ground is summer-fallowed, thus producing a crop only once in two years. The average yield is about fifteen sacks an acre; a sack weighing one hundred and forty pounds. Wheat is now \$1.25 a hundred pounds. E. L. L.

Esposito, Yolo county, Cal.

FROM NORTH CAROLINA.—A NEW DEPARTMENT IN RAILROADING.—The Seaboard Air Line railroad, of Virginia, the Carolinas and Georgia, has established a department not only new to itself, but hitherto entirely unknown in the history of railroads. This department is called the Industrial Department. Mr. John T. Patrick, for many years commissioner of immigration for the state of North Carolina, and a man well posted in the needs and opportunities of the South, has been placed at the head of this department. Mr. E. St. John, vice-president and general manager of the Seaboard Air Line, a man well known in Chicago and the north central states as a most successful railroad manager, gives it his hearty support. These two facts show that the management of the road means to give its new policy a fair trial. And what is this new policy? Simply to try to help the people living in the territory contiguous to its lines to know more, get more, have more and be more than now. In short, a policy of increasing its own business and value by first increasing the wealth and opportunities of the people. Under the direction of this new department experiment farms are being established, one for each ten miles of the road. Also the means of improving their breeds of stock are provided

free of cost to the farmers. Beyond this a train of cars, to be a traveling school of instruction in the preserving of fruits and in the use of modern farm and dairying machinery, will soon be put on the road. This train will carry the machines themselves, with persons as experts to give instructions in their use. This is all without cost to the people. The knowledge gained by the people through these means will prove not only power, but also wealth. Increased wealth of the people means a larger business for the road. This Industrial department, with its experimental farms, its progenitors of improved breeds of stock, and its traveling training-school, is indeed a new plan. But though new it is wise and must prove a success. OBSERVER.

Pine Bluff, N. C.

Before cold weather sets in again why not go through your outbuildings and see if there are any leaky roofs, any shingles or clapboards coming off, any cracks that need stopping up to make the buildings warm?

Remember your stock will do better if kept warm, chickens grow faster, hens lay more eggs, cows need less grain and give more milk. The best roofing and side-covering to-day is the celebrated *Neponset Waterproof Red Rope Fabric*. It can be used for roofing, covering sides and walls of houses, barns, hen-houses, green-houses, hotbeds, haystacks, wagon-tops, and many household purposes. It is very much cheaper than shingles or clapboards, and while it won't last forever, it lasts a mighty long time. With the necessary nails and tin caps to put it on, it only costs at the factory one cent a square foot. You see, a little goes a long way.

For inside lining use *Neponset Black Building Paper*. It is much cheaper than tarred paper, odorless, clean, economical, water and air tight, and vermin-proof.



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Those side wings are hinged. SAFETY SHAFTS.

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to wash as clean as can be done on the washboard, even to the wristbands and collar of the dirtiest shirt, and with much more ease. This applies to Terriff's Perfect Washer, which will be sent on trial at wholesale price. If not satisfactory, money will be refunded. Agents wanted. For exclusive territory, terms & prices, write Portland Mfg. Co., Box 4, Portland, Mich.

17c. PER ROD Is all it costs to build the best Woven Wire Fence on earth with our Automatic Machine. We sell the Famous COIL SPRING WIRE. CATALOGUE FREE. KOKOMO FENCE MACHINE CO. Box 67, Kokomo, Ind.

Our Farm.

THE POULTRY YARD.

Conducted by P. H. Jacobs, Hammonton, New Jersey.

THE BREEDS AND PROFITS.

WHERE the farmers fail is in certain experiments which seem to be universal with them; the principal one being the crossing of two breeds in the attempt to produce something better than the originals. Great pains and expense are undergone in the endeavor to get one or two pure breeds, one of which may be of the Asiatic family and another of the Mediterraneans; for instance, the Brahmas and Leghorn types are very dissimilar and adapted for purposes especially characteristic of their kind. The Brahma is large in size, has a pea-comb, feathered legs, and cannot fly. The Leghorn is small, light in body, active, and has a single comb (some varieties possessing rose-combs), and it does not thrive well in confinement, preferring to forage, being able to fly over a high fence. The two breeds were produced by crossing, but are the results of a long-continued system of selection. The farmer knows that the Brahma can endure severe winters and is a persistent sitter when it becomes broody, while the Leghorn rarely sits, being considered a non-sitter. After keeping them separate for awhile, it occurs to the farmer that by crossing the two breeds he can unite the good qualities of both and secure something superior to either of the parent breeds. That is where he ruins his breeds, for instead of deriving from the cross a bird combining all the desirable characteristics of the two breeds, he simply divides and reduces their capacity. He loses the size of the Brahma, the advantages of the pea-comb and the activity of the Leghorn. He does not have in his cross-bred fowls the prolificacy of the Leghorn nor the hardness of the Brahma, and he also finds himself stocked with a motley lot of birds with no uniformity. After a year passes he allows his fowls to run together and his flock becomes a lot of scrubs.

Now, this crossing of the two breeds to get something superior has been tried hundreds of times and by many. It is the same old story of attempting to improve in a hurry, and it cannot be done. New breeds cannot be made in a day. All of our breeds now in use resulted from many experiments, and it requires a quarter of a century to fix the characteristics of a breed so that the bird will be true to standard of points. It has been maintained that a hen of a non-sitting breed will lay more eggs than a sitter and will give a larger profit. This does not always happen. The non-sitter also requires a resting spell, as well as the sitter, but during that period she does not produce anything, while the sitter will raise a brood of chicks for market. Another point is that the best sitters are those that lay in winter, the non-sitters producing more eggs in summer than at other seasons, which is natural, as they are usually active, requiring a range, and will not be content under confinement. After all, there is but little advantage in what may be termed the best laying breed, as careful records kept of a whole year's work show that with fourteen breeds on trial in competition there was only a difference of eleven eggs between the best lot of hens (average for each hen) and the lowest, while only one egg was the difference between the first, second and third lots, and the breeds consisted of both sitters and non-sitters. A trial with the same hens another year brought the best of the previous year to the fourth place. It is better to keep the large breeds (sitters), if hens are to be kept in confinement, as non-sitters give the best results only on a range.

LANDS FOR SALE.

AT LOW PRICES AND ON EASY TERMS.

The Illinois Central Railroad Company offers for sale on easy terms and at low prices, 150,000 acres of choice fruit, gardening, farm and grazing lands located in SOUTHERN ILLINOIS. They are also largely interested in, and call especial attention to the 600,000 acres of land in the famous YAZOO VALLEY of Mississippi, lying along and owned by the Yazoo & Mississippi Valley Railroad Company, and which that Company offers at low prices and on long terms. Special inducements and facilities offered to go and examine these lands both in Southern Illinois and in the "Yazoo Valley." Miss. For further description, map and any information, address or call upon E. P. SKENE, Land Commissioner, No. 1 Park Row, Chicago, Ill.

POULTRY IN LARGE FLOCKS.

Many claims have been made in favor of poultry-raisers which have done harm by inducing inexperienced persons to venture into the poultry business under the delusion that they can surely make a competency even if failure ensues in every other enterprise. Careful reflection should convince the most enthusiastic individuals that it is impossible to realize much that is held out invitingly. With the sum of a few hundred dollars, or as much as a thousand, it is proposed to engage in the poultry business. The question is considered and discussed as to the profits to expect. Comparing the business with any other it can be noticed that there is no occupation that would not be considered very profitable with a profit of twenty per cent, or even one half that percentage. To realize \$200 a year on an investment of \$1,000, therefore, is to secure in the poultry business something that is difficult to obtain in any other direction, yet many who invest \$1,000 in poultry and the necessary buildings are not satisfied unless they can make a sum nearly equal to the capital employed. One cause of much expectation is the fact that fowls multiply rapidly, and will naturally increase, which is true; but it requires the loss of a year for the chicks to reach maturity, while the expense is occurring all the time. The sum of \$1,000 would not pay for the buildings and fowls necessary to start with five hundred hens, and the profit will not amount to one dollar a hen for the whole number. Right here it may be urged that one can, by doing the work himself, make \$500 a year on a capital of \$1,000, but it will not be profit, as the labor must be paid for, whether it is performed by the investor or by employing some one to assist. That, however, is the bright side of the business. If a person can invest his money so as to give himself employment it will be a great point gained, but only the most experienced poultrymen have succeeded in keeping five hundred hens. On the farms where the farmers are already established they can, by utilizing their labor in winter, make poultry pay well on their investment, but all who may engage in the business will find that as soon as the labor is hired the profits will not exceed those derived from some other pursuits.

DUCKS AND THEIR COLOR.

The ducks having white plumage are preferred, because the pin-feathers are not so liable to show in the carcasses; and those who have had the work of picking ducks can testify that it is not only difficult to get the carcasses perfectly clean, but one must be an expert to have the dressed ducks arrive in the market in the most attractive condition. Now, of the white breeds, the Pekin and Aylesbury are preferred, the Pekin being considered better than the Rouen, which is dark in color; but the breed with the plumpest and best carcass is the Cayuga, the drakes of which can be made to weigh ten pounds, and the female will lay as many eggs as her sister of the Pekin breed. Unfortunately the Cayuga is a black duck, although after it is dressed it shows a beautiful golden skin. It is a question whether, in order to send the most attractive carcass to market, the raiser of ducks is willing to be put to a little more work on the picking in getting rid of black pin-feathers. The Cayuga also stands confinement well, is hardy, and is really the best of the breeds.

LINSEED-MEAL IN SUMMER.

Linseed-meal is not a summer food, but it can be allowed with excellent results if given about three times a week, in the proportion of about one pound of linseed-meal with four pounds of corn-meal, for fifty hens. It is one of the best remedies for bowel disease that can be used, and it is also excellent in the food of molting hens. It is an agreeable change, and frequently supplies the hens with needed substances that are lacking in other foods.

THE Portland Manufacturing Co., of Portland, Michigan, are the sole manufacturers of Terrill's Perfect Washing Machine, which has met with great success, which is due solely to the fact that they guarantee their washer to do the work just as represented, and in case any purchaser should be in the least dissatisfied the company will gladly refund their money. Not only has their excellent invention brought ease and economy into thousands of homes, but many agents have made money by handling it. It will be to the interest of those wishing profitable employment to write to this concern.

CLEANING THE POULTRY-HOUSE.

There is much less consideration given the roosts and nests than any other portion of the poultry-house. With the desire to save labor the roosts are nailed to the walls and the nests are fastened in place so as to become a part of the building itself, the consequence being that it is impossible to thoroughly clean the poultry-house and rid it of vermin; for as long as there is a crack in which a louse can hide there will be liability of rapid increase of the pests, a single female laying enough eggs in a day to furnish the foundation for a million in a week. Every roost should be level, that is, all the roosts should be the same height, and should be so constructed as to permit of being carried outside to be cleansed. The nests should not be joined, but separate; soap-boxes being excellent, open at the ends, so as to compel the hens to walk in rather than fly upon the nests from the top. If the roosts and nests are taken outside they should be lightly brushed with kerosene and a lighted match applied. The fire will run over the surface without doing any harm. The roosts should be treated in the same manner. If properly constructed the roosts and nests can be taken out and replaced in a few moments, leaving an empty poultry-house, which can be easily cleaned.

CONDITIONS AND BREEDS.

Every breed has its friends who are ready to claim it as superior to all others, and that it is the best winter layer as well as the most prolific in summer. There is truth in what the advocates of the different breeds claim, but everything connected with the excellence of the flocks depends upon circumstances. Breeders of Light Brahmas will maintain that their breed excels all others in winter-time, yet instances have occurred where Light Brahmas do not lay while Leghorns on an adjoining farm produced eggs during the whole winter. The fact was that the Leghorns had the most favorable conditions, such as warm quarters, plenty of room for exercise in the poultry-house, and a variety of food. There are also summer conditions. The fowls that have a range will do better in summer than those kept in confinement. Give Light Brahmas a range in the summer season, avoid feeding them to excess, and they will probably produce as many eggs in summer as the Leghorns. There is really no best breed unless the poultrymen adapts the conditions to the breed, so as to derive the best results therefrom.

CROP-BOUND.

There are more crop-bound fowls late in the year than at any other period, for the reason that in the endeavor to secure a supply of bulky food the fowls will swallow dried grass and other substances, which pack in the crops and prevent the passage of the food to the gizzard. There is no way to prevent the difficulty if the hens are on a range, but as soon as frost destroys the grass it will be an advantage to supply finely cut clover hay that has been scalded, which will lessen the desire to consume substances which they should discard.

DARK-EGG BREEDS.

The Brahmas and Cochins are the two breeds that lay very dark-colored eggs. All others produce eggs that are dark to a certain extent or are pure white. Even among the two breeds mentioned there will at times be hens that will not produce eggs as dark as others, but it may be depended upon that dark eggs are never obtained from the non-sitters. The hens that lay dark eggs may not be the best layers, but where the market requires a special article they are the ones that should be used for supplying it.

INQUIRIES ANSWERED.

Weight of Pekins.—L. B., Xenia, Ohio, writes: "What is the standard weight of Pekin ducks?"

REPLY:—Drake, eight pounds; female, seven pounds. Some exceed these weights, however.

Vertigo.—L. J., Woodstock, N. Y., writes: "What causes vertigo. Will the use of kerosene, etc., in a poultry-house cause gas? Would the cleanings of the poultry-house, worked into the soil, cause sickness?"

REPLY:—Vertigo is due to high feeding, the remedy being to reduce the food, giving none in summer except that which the hens pick up on a range. The kerosene causes no gas, and the droppings in the soil will do no harm.

Leg-feathering.—J. E., Denver, Pa., writes: "Are the Langshans required to have heavy leg-feathering the same as other Asiatic breeds?"

REPLY:—Only the Cochins and Brahmas should be heavily feathered, but Langshans are not required to have feathers on the middle toes.

Hens Not Laying.—R. E. F., Sterling, Ill., writes: "What is the cause of hens not laying that are on a range and fed twice a day on all the food they wish?"

REPLY:—They have been overfed and are very fat, being in a condition unfavorable for laying. Omit the two rations and compel the fowls to seek all their food.

Lameness.—E. R. S., Camden, N. J., writes: "I have a fowl that is lame, no injury showing. She is getting more so every day. Being a valuable pure-bred hen I wish to cure her. The roost is high and the fowls in good condition."

REPLY:—It is due to the jar when reaching the ground from the roost, and is a frequent occurrence. The remedy is to have a low roost or allow the hens to rest on straw at night.

SCIENCE APPLIED TO CORN.

The "Scientific" and "Buckeye" Corn Harvesters, made by the Foss Manufacturing Co., Springfield, Ohio, have safety-shafts, safety-seats and safety-guards. They are light draft and have hest tempered steel knives, double cast-iron wheels, and wings which are easily turned up out of the way. Boys can handle them easily and safely, and the cost is so low that a machine will pay for itself in cutting twenty or thirty acres of corn. Write them.

NO HOPE for success in the poultry business so long as your fowls are pestered with lice. **Lambert's Death to Lice** will rid you of this trouble and turn loss into profit. Sample 10c. postpaid. 100 ozs. by expr. \$1.00. D. J. LAMBERT, Box 303, Apopka, Fla.

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A WOMAN OR EVEN A CHILD CAN RUN. UNBREAKABLE STEEL KNIVES. NEW FEED. SELF-CLEANER. PAWEBSTER, GAZENOVIA, N.Y.

The Monarch Incubator.

Most practical machine in the market. All large New England poultry growers use them, many firms using from 15 to 25 of the 600 egg size. 1000 barrels of dressed poultry marketed each season, from within a few miles of our factory. All hatched in Monarch Incubators. Send stamp for illustrated catalogue. JAMES RANKIN, SOUTH EASTON, MASS. Mention this paper.

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Mann's Green Bone Cutter, Mann's Granite Crystal Grit will make hens lay lots of eggs. They prove the victory of science over guesswork. Success is certain. Hens lay twice the eggs when fed green bone and grit.

Mann's Bone Cutters have a world-wide fame. Sent C.O.D. or on Trial. Illust'g free if name this paper. F. W. MANN CO., Milford, Mass.

GET READY for the FAIRS. Send for description of the famous O.I.C. Hogs. First applicant from each locality secures a pair ON TIME and agency.

L. B. SILVER CO., 101 Summit St., Cleveland, O.

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VICTORY FEED MILL

Grinds corn and cob and all kinds of small grain. Made in four sizes, for 2, 4, 8 and 10 horse power. Send for catalogue and prices.

THOS. ROBERTS, Box 91, Springfield, Ohio. Mention this paper.

FREE Our Little Folks Magazine

A sample copy of will be sent free to any mother who will send her address. A 24-page magazine for the little ones under 10 years of age. It contains beautiful pictures, simple stories. Large type, fine paper and handsome cover. Address P. W. RAIDBAUGH, 98 Market St., Chicago, Ill. Mention this paper.

FLORIDA THE LAKE HANCOCK COLONY.

Hancock, Polk County, Florida. On main line Plant System Railway. This tract of 10,000 acres extends from the railroad south to Lake Hancock, one of the most beautiful lakes in Florida, being about five miles long and two miles wide—abounding in choicest fish and the paradise of duck hunters. On each side of a grand boulevard, 130 feet wide, from the depot to Lake Hancock, are farms of twenty acres each, and all the balance of the tract forty-acre farms. These lands are beautifully located, being about 200 feet above the sea level and sloping gently south to the lake. The soil is loamy, and will raise any kind of fruits, grapes, nuts, vegetables, tobacco, berries, as well as oranges, lemons and other semi-tropical fruits. Town Site.—Lots one acre each—no less—\$25 each, cash. Magnolia Ave.—130 ft. wide—20-acre farms, \$10 to \$20 per acre. 40-acre tracts, \$5 to \$10 per acre; 4-acre balance, 2 and 3 years. Send for maps and general information. International Homestead Co., 306 Marquette Bldg., Chicago, Ill., or 308 Franklin St., Tampa, Fla.

Queries.

READ THIS NOTICE.

Questions from regular subscribers of FARM AND FIRESIDE, and relating to matters of general interest, will be answered in these columns free of charge. Querists desiring immediate replies, or asking information upon matters of personal interest only, should inclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query, in order that we may answer by mail if necessary. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

Preserving Fence-posts.—J. L. M., Salmon City, Idaho, writes: "Please tell me what is the best stuff to put on pine and fir fence-posts to prevent them from rotting in the ground."

REPLY:—Probably the best way is to dip the lower end of the posts into a large kettleful of hot coal-tar.

Rennet Tablets.—J. L. H., Brownwood, Tex. You can get rennet tablets for cheese-making from Chr. Hansen's Laboratory, Box 1102, Syracuse, N. Y.

Cider.—A. H. S., Bennington, Neb. In reply to your inquiry about making cider, we republish the following from a former number of FARM AND FIRESIDE:

"To make choice cider, select sound, ripe apples. Make the cider in cool fall weather. Carefully filter it as it runs from the press; every particle of pomace should be removed. Put the cider into a sound, sweet cask, and keep it in a cool place. Insert a small rubber tube in the bung, which should fit tightly. Let the tube bend over and the end hang in a vessel of water. The carbonic-acid gas formed in the cider will pass off through the tube, no oxygen will be admitted and fermentation will be prevented. After standing awhile in a cask, the cider may be drawn off and bottled or put into small stone jugs. Seal the corks carefully, and keep the bottles or jugs in a cool, dry place. Various things are used in cider to keep it sweet. Some are good; some spoil the flavor; some make it unfit for use. By trial you can find out which are reliable.

Coal Ashes.—P. A. G. S., Bradford, Mass. Coal ashes contain but a trace of plant-food. Applied to heavy clay soil, they have a good mechanical effect. The best use you can make of them is to sift and put them under the hen-roosts. They are valuable as absorbents for poultry droppings or in the stable.

Potato-scab.—I. T., Grand Rapids, Mich., writes: "What is the cause of scabby potatoes? When I planted them they were all right; but now when I dig them they are all scabby."

REPLY:—The cause is supposed to be a fungous disease. In your case the spores were in the soil when the potatoes were planted. As preventive measures rotation of crops and treatment of the seed-potatoes are recommended. Soak the seed-potatoes for two hours before planting in a solution of corrosive sublimate, one part to one thousand of water.

CHEAP EXCURSION WEST VIA BURLINGTON ROUTE.

One fare plus \$2.00 for the round trip to Nebraska, Kansas, St. Paul, Minneapolis, Black Hills, certain portions of Iowa, Colorado and Utah, Sept. 7th, 21st, Oct. 5th and 19th. Ask your ticket agent for additional information. L. W. WAKELEY, General Passenger Agent, St. Louis, Mo.

VETERINARY.

Conducted by Dr. H. J. Detmers.

To regular subscribers of FARM AND FIRESIDE answers will be given through these columns free of charge. Where an immediate reply by mail is desired, the applicant should inclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Subscribers may send their veterinary queries directly to Dr. H. J. Detmers, 1315 Neil Avenue, Columbus, Ohio.

NOTE.—Parties who desire an answer to their inquiries in this column must give their name and address, not necessarily for publication, but for other good reasons. Anonymous inquiries are not answered under any circumstances.

Milking a Calf.—E. P., Itasca, Tex. You ought not to have permitted the children to milk a sucking calf, and at any rate should put a stop to it now.

A Sick Colt.—C. J. W., Cheboygan, Mich. According to your meager description your colt probably suffers from some digestive disorder, and maybe is full of worms.

Petechial Fever.—C. L. H., Wellington, Kansas. What you describe is a case of petechial fever, or morbus maculosus, an infectious disease formerly known by the name of "horse-typhus."

A Lame Sow and Crippled Pigs.—R. W. S., Heistersburg, Pa. If you had not said that the feet of your lame sow "are as sound as they can be," I would not have hesitated to say that her disease is founder (laminitis); but if you are not mistaken, and the feet are as sound as they can be, they, of course, are not diseased, and I am not able to answer your question. Your pigs, ac-

ording to your description, suffer from an inflammation of the joints, a disease frequent among young animals kept on an improper diet. When this reaches you it will be too late for any treatment.

May Be Tuberculosis.—F. S., Jewett, Ohio. From your description I have to suspect that your Jersey cow is tuberculous, and in order to definitely decide that important question have to advise you to subject your cow to the tuberculin test. Any competent veterinarian will be able to apply it.

Chronic Diarrhea.—J. P. B., Nanvoo, Pa. Chronic diarrhea, especially if it has already produced considerable emaciation, does not easily yield to treatment, and particularly if the cause or causes of the case in question, the exact condition of the animal, the quality of the food and drink and many other things not without influence upon the morbid process, are not known, it is a very risky thing to prescribe a treatment without first making a thorough examination. Therefore, and as your horse is such a valuable animal, I have to advise you to have the same examined and treated by a competent veterinarian, and have no doubt that in your state one can be found at not too great a distance.

Probably a Severe Catarrhal Affection of Long Standing.—G. H. W., Stevens Point, Wis. The copious discharge of a mucous-like substance from one nostril of a horse, the only symptom you mention, was probably caused by a rather severe catarrhal affection of long standing, and more or less limited to some part of the respiratory passages. More than this cannot be made out from one solitary symptom, and consequently your other questions cannot be answered. If you are interested in the case, and it is not idle curiosity that induces you to ask all your questions, have the horse, which you say was standing at the roadside, examined by a competent veterinarian.

Diseased Pigs.—H. A. V., Riverdale, Kan. If your hog-yard, or place in which the pigs are kept, is very wet and full of mud and rotten manure, the affection of the lower extremities of your pigs is easily explained. Remove them to perfectly dry ground, on which they cannot get their feet in water or wet and muddy places, and there make twice a day to all the sores a liberal application of a mixture composed of liquid subacetate of lead, one part, and olive-oil, three parts; and unless the sores are too deep, or have already caused pyemia, a healing will soon be effected. White hogs are much sooner affected by such conditions than black hogs, especially under a hot Kansas sun, and young pigs suffer much more and earlier than older animals.

Possibly Tuberculosis.—J. M. B. Y., Waxahatchie, Tex. Although knots or swellings in the mammary glands of cows, and blood-tinged milk may be produced by various causes (see answers given in recent numbers of this paper), there is in a case like yours always some suspicion of tuberculosis. As this is a disease which requires, for obvious reasons, a definite diagnosis, I deem it advisable to subject the cow to the tuberculin test, by which the question, tuberculosis or not, will be decided. If there is no veterinarian in your place prepared to apply it, write to Dr. Mark Francis, professor in the Agricultural and Mechanical College, of Texas, at Bryan, Brazos county, who undoubtedly can and will inform you how and where you can get the material and how you can get it applied.

Probably Tuberculosis.—A. L. C., Anoka, Minn. Although it is barely possible that the panting and the "shortness of breath" of your cow, if the latter is a very greedy eater, is caused by too full a stomach, the fact that she is gradually getting worse, that she has commenced to wheeze and when lying down to rest on the brisket with the fore legs stretched out forward, makes it much more probable that she is suffering from pulmonary tuberculosis, notwithstanding that you do not say anything about her coughing, which, in cases of pulmonary tuberculosis, frequently can be heard as a short and rather weak, hacking cough. Unless you become convinced that the whole trouble is simply caused by the intemperance of the cow in eating, and unless there is no coughing whatever, I refer you to the advice given to F. S., Jewett, Ohio, in this column.

Does Not Perspire.—L. L. R., Houston, Texas. If your horse does not perspire when at work, it must be supposed that the same either has diseased lungs, is perhaps suffering from so-called "heaves," and that this, the want of respiration, is made up for by the accelerated respiration; that the same makes water too often or in too large quantities (polyuria or diabetes) in consequence of having eaten too much musty oats or other musty food, or that the same has chronic diarrhea, so that the organism in that way loses so much fluid as to deprive the sweat glands of the skin of their functions. Unless the horse has diarrhea, I would advise you to feed the animal with soft and juicy food of a faultless quality, and to exempt the same from all kinds of hard work. Spoiled, musty, dusty and contaminated food of any kind and description must be avoided under all circumstances, and the water for drinking also must be clean and pure.

A Wounded Teat—Garget.—G. R., Robe, Wash. The treatment of a wounded teat, like that of any other wound, depends upon the nature, the extent, the depth, the age and the condition of the wound; therefore, where nothing of all this is known, it is impossible to prescribe a rational treatment. If such a wound is fresh and nothing but the skin and tissues immediately beneath is torn, the treatment would consist in first cleaning the wound and making the same aseptic (disinfecting it with a mild antiseptic), and then in uniting the borders of the torn skin by means of a few neat stitches with sterilized silk or catgut. After this the surface must be kept clean, and as much as possible aseptic, by frequently washing the same with a weak solution of creoline (two to four per cent) or of any other mild antiseptic. The other trouble you complain of is a case of garget, caused by either negligent or insufficient frequent milking. Thorough milking once every two hours constitutes the remedy.

Bloody Milk.—A. H., Sumpter, Oreg. As has been so often stated in these columns, "bloody milk" may be the result of many different causes, consisting in anything that causes not only congestion, but also a lax or weakened condition of the capillaries of the mammary glands or udder. Consequently it may be caused by external violence, rude milking, any kind of injury, very hot weather, physiological changes going on when the animal is in heat, food possessing acid properties acting upon the mammary glands, food contaminated with micro-organisms which affect (lessen) the resistancy of the walls of the capillary blood-vessels in the mammary glands and other (sexual and urinary) organs; further, "bloody milk" is often a concomitant (symptom) of certain infectious diseases, among which may be mentioned as the most important, tuberculosis; but the latter, of course, only if the morbid process has invaded the mammary glands. In each single case, therefore, the first thing necessary is to ascertain the cause or causes, and if it is found that the latter can be removed, a removal of the same constitutes the treatment.

Sores on a Horse's Legs.—A. F. L., Coconut Grove, Fla. Procure in a drug-store a mixture of liquid subacetate of lead and olive-oil, one part of the former to three parts of the latter; or two to three ounces of the former to six or nine ounces of the latter. Make of this mixture, twice a day, a liberal application to all the sores, and keep your horse in a dry place; or, if in the stable, on a dry and clean floor. If the sores have originated, as from your description it must be supposed they have, the above treatment will soon effect a healing. Don't apply any water to the sores.

Contracted (?) Muscles—Rachitic Pigs.—M. J. B., Waitsburg, Wash. The muscles of your horse's leg, which were kept idle during the healing of the large wound, are probably more shrunken than contracted, and if such is the case there is a fair prospect that the same will reassume their former size and position after the horse is free from pain and has learned to use them again. This, it is true, may require considerable time. If, however, the contraction you speak of is not apparent, but real, there is no hope even of an improvement, especially if the principal nerves, or their trunk, the crural nerve, have been severed by the barbed wire, or have suffered destruction, together with a considerable portion of muscular tissue, while the wound was open. Your pigs, it seems, owing to their food containing too much acid (in the swill) and not enough nitrogenous compounds, phosphates and lime-salts (in the shorts and corn on the cob), became rachitic and lame. A suitable change of food (less swill and rich food in the wanting constituents) would have constituted the remedy.

Curdling Milk.—F. F. C., Shrewsbury, Vt. The curdling of the milk of your cow soon after it has been milked may be due to various causes. So, for instance, it may be that the milk is allowed to remain too long in the udder. A good milk-cow when at the very height of milk production should be milked at least three times a day, especially if the weather is warm and sultry, and the cow supplied with an abundance of good food. It may also be that the place where the milk is kept is too warm or too close, and not sufficiently ventilated. Finally, such a premature coagulation of the milk is often produced if the milk-vessels, particularly wooden ones, are not perfectly clean when the milk is put into them. In such a case a thorough cleaning of the milk-vessels, and a rinsing of the same with a weak solution of carbonate of soda, constitutes the remedy; and where too high a temperature must be accused, the milk should be cooled as soon and as much as possible by placing the milk pans or vessels in a tub with cold water. Where the fault is apparently with the milk as it comes from the cow, the milking must be sufficiently often and at regular intervals of time, and in very hot weather the food given to the cow must not be too heavy.

A Roarer.—A. A., Clarkville, Ky. According to your description your three-year-old filly appears to be a so-called roarer. As roaring may be caused by any kind of obstruction in the respiratory passages from the nostrils to the entrance of the trachea into the lungs, and as the treatment necessarily must consist in a removal of the obstruction, I advise you to have the animal examined by a competent veterinarian. In most cases of roaring the cause consists in a paralysis of the muscles which have the office of opening the arytenoid cartilages of the larynx at the act of inspiration (the paralysis is more frequently on the left side than on the right), and then the treatment, which, however, does not always meet with the desired result, consists in a surgical operation by which the cartilage is removed. A description of this operation will not be necessary, because the same can be successfully performed only by an expert surgeon thoroughly familiar with the anatomy of the parts in question. If on examination it should be found that the obstruction consists in a tumor, or so-called polyp, which has its seat in one of the nasal cavities and is not inaccessible, the same may be removed by means of an instrument called an ecraseur; or perhaps by a kind of a wire ecraseur especially constructed for such a purpose. Still, the veterinarian who makes the examination undoubtedly will be able to decide what can and what cannot be done, and I will only say this much, that nothing can be accomplished by external applications.

Diagnosis of Glanders.—H. W. H., Fort Gibson, Ind. Ter. There are several means by which glanders can be diagnosed, even if the characteristic ulcers on the septum of the nose cannot be seen or are not present. Of course, if these ulcers are seen by illuminating the nasal cavity with reflected sunlight thrown into it by means of a small mirror, the diagnosis is secured, even if all other symptoms are undeveloped, which, however, is never the case. Another method consists in the application of the mallein test, which to describe will not be necessary, as it has to be applied by a veterinarian. The third method, even more reliable than the mallein test, consists in inoculating a susceptible animal with the nasal discharges of the suspected horse. The best animal for this purpose is a guinea-pig, which if inoculated will not only take the disease, but also will soon succumb to it. The next best animal for this purpose is a worthless mule, because the same is not only more susceptible than a horse, but the disease also comes much sooner to a plain development in a mule than in a horse. There is yet another way which can be made use of if the submaxillary lymphatic glands are swelled. It consists in extirpating such a gland and in examining it microscopically for the glanders bacilli, but this method requires a very good microscopist thoroughly familiar with the appearance and characteristics of the glanders bacilli.

Warts.—T. J. C., Gainesville, Fla., and S. C., Doylestown, Ohio. As has been repeatedly stated in these columns, there are several methods of treating warts. One is to leave them alone, because if one is not too impatient and can wait he will find that most warts, sooner or later, will disappear without any treatment. If a treatment is resorted to, the same must be adapted to the situation and condition of the warts. Warts that have a plain neck (are pedunculated) are best removed by means of a ligature passed around the neck as close as possible to the skin and drawn as tight as it can be done. For large warts a waxed end of a shoemaker is the best material, while for small ones a stout silk thread will answer. Large flat (sessile) warts are most conveniently removed with nitric acid, to be applied by means of a small piece of surgeon's sponge tied to a stick of convenient length. If nitric acid is used the applications must be repeated about once every minute until two thirds of the wart is eaten away, but great care must be taken not to bring the nitric acid in contact with anything but the wart. Small warts, particularly if situated on tender skin, are best removed by means of a concentrated solution of corrosive sublimate in strong alcohol, to be applied with a camel-hair pencil; but with this, too, particular care must be exercised to bring the solution in contact only with the wart and with nothing else. The applications must be repeated until the whole surface of the wart is coated with a thin, white film of corrosive sublimate. After this treatment the wart, as a rule, will shrink in a day or two, and then will gradually disappear. If this should not be the case, the applications have not been sufficiently thorough, and the treatment must be repeated. This, however, on the whole, is preferable to overdoing the thing the first time. In some cases it may become advisable to remove a sessile wart by means of the surgical knife; but as this always causes more or less bleeding, and as the wart in this way is seldom thoroughly removed, caustics, which will stop the bleeding and also destroy the remaining rests, must be applied immediately after the operation. Still, wherever the knife is to be used, it will be best to have the operation performed by a veterinarian. Since "Wart" questions have been answered nearly every month, I ask all those who intend to ask "Wart" questions in the near future to cut out this answer and to preserve it. For warts on cows' teats, consult FARM AND FIRESIDE of August 1st.

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Our Fireside.

BEAUTIFUL HANDS.

Oh, your hands—they are strangely fair!
Fair—for the jewels that sparkle there—
Fair—for the witchery of the spell
That ivory keys alone can tell;
But when their delicate touches rest
Here in my own do I love them best,
As I clasp with eager acquisitive spans
My glorious treasure of beautiful hands.

Marvelous—wonderful—beautiful hands!
They can coax roses to bloom in the strands
Of your own brown tresses, and ribbons will twine,
Under mysterious touches of thine.
Into such knots as entangle the soul,
And fetter the heart under such control
As only the strength of my love understands—
My passionate love for your beautiful hands!

As I remember the first fair touch
Of those beautiful hands that I love so much,
I seem to thrill as I then was thrilled
Kissing the glove that I found unfilled—
When I met your gaze and the queenly bow
As you said to me, laughingly, "Keep it, now!"
And dazed and alone in a dream I stand
Kissing the ghost of your beautiful hand.

When first I loved you in the long ago
And held your hand as I told you so—
Pressed and caressed it and gave it a kiss,
And said, "I could die for a hand like this!"
Little I dreamed love's fullness yet
Had to ripen when eyes were wet,
And prayers were vain in their wild demands
For one warm touch of your beautiful hands.

Beautiful hands! Oh, beautiful hands!
Could you reach out of the alien lands
Where you are lingering, and give me to-night
Only a touch—were it ever so light—
My heart were soothed and my weary brain
Would lull itself into rest again;
For there is no solace the world commands
Like the caress of your beautiful hands.

—James Whitcomb Riley.

AN INSPIRED BLUNDER.



RAMP? You see only one type in these middle state suburban villages. It is along the big transcontinental rail-ways that the varied phenomena of human history presented by these gentlemen of the road may best be studied.

I graduated in this branch of knowledge at Wigwam, a small station three miles from Santa Rosa, Colorado, where I replaced the "section boss" during his vacation—grin away boys! I was filling general-utility parts that summer, because of financial disaster—which you can spell p-o-k-e-r, if you like!

All outbound trains stopped at Wigwam for water, and the depot master at Santa Rosa used to send empty box-cars to wait on our side-tracks until some homeward-bound freighter could return them to where they belonged. These cars offered ideal hiding-places for tramps, and rows between train-hands and such unprofitable voyagers were of frequent occurrence and of diverse aspects, both piteous and humorous. I've seen a Methodist parson turned out, who had spent the money for his fare on charity, and I've looked on at the expelling of a swell, temporarily beggared by riotous living, whose name is known among your Four Hundred. Often my sympathies were opposed to the interests of my company, and once I attempted an evasion of its rules—with the result that, except for somebody's "inspired blunder," I should be haunted by the responsibility of a tragedy.

My term of service was over. The man whose substitute I had been would come back to his post within a couple of hours. The afternoon was hot, the little office very still, and a nap assisted me to get rid of some irksome time, when across the borderland between sleeping and waking I heard a voice.

"Will you give me a drink?"
The voice was refined, and so familiar that I roused completely and confronted my visitor.

He leaned against the door-frame—a dingy, drooping figure, whose hair and half-grown beard were dusty past guessing at their original color, while his dark eyes made odd contrast with this otherwise universal grayness. Yet they were familiar, after the same elusive fashion as his voice.

"Who are you?" I asked, briskly. "I've seen you before."

The tramp drew his grimy brows together in a bewildering frown.

"Watts?" he muttered, hesitatingly. "I remember you now." He dropped on the end of a bench beside him. "I'm Terry Rolfe, and dead beat," he gasped.

My memory bore him prompt testimony, and turning to a cupboard I produced a bottle and a glass. He swallowed the whisky with the mingled eagerness and difficulty of faintness and of a throat parched almost to paralysis.

I watched him curiously, comparing my last sight of pleasant, prosperous Terry Rolfe with this broken-down tramp. He and his chum, Jim Crosby, belonged to a party of

engineers in whose company I had camped for several weeks during the preceding spring. Those two were just from the East—the tenderfeet of the lot—rather given to picturesque sombreros and brilliant red sashes, yet jolly comrades.

"Have you been long on the road?" I asked, when he gave me back the glass.

"A—few days."

"Where from?"

He stared at his shabby boots without reply.

Mentally I reviewed the list of catastrophes in recent daily papers, and could recollect no mention of the name of Rolfe.

"Hard luck, eh?"

He nodded.

"Where is your chum—'doubles' we used to call you?"

He looked dumbly up at me, while into his eyes came that which none of us beheld often, thank God! but which at first meeting we know to be despair. Then his head drooped, and he faintly.

I laid him on the floor, and worked over him until he revived.

"Why should I bear this?" he murmured, half consciously. "I would let no other man live who had killed Jim!" He caught his breath with a sobbing cry that hurt to hear. "My darling, I must go to her! I must tell her how I—!" His voice sank inaudibly.

And I remember hearing that he was to marry Jim Crosby's pretty sister next autumn.

Well, boys, we read the Bible occasionally in Colorado, and we find lessons which fit our lives. Such lessons teach us to prefer the Samaritan to the Pharisee, even when our neighbor proves to be stained by the blood of a friend, and mad with the resolve to tramp across a continent to see once more the sweetheart from whom this crime will part forever!

Rolfe rallied some strength after he had eaten the fragments of my dinner and bathed his blistered feet. But he refused my offer of a ticket on the night express to the East.

"I cannot risk meeting any one from Trinidad!" he said, hoarsely.

I bethought me of certain box-cars waiting on our side-tracks to be carried during the next twenty-four hours many hundred miles further from Trinidad. Within one of these empty vans I proposed to install him, and so label it that neither tramp nor official would disturb his solitude until he reached the limit of its journey, where he could probably slip out undetected. This plan he accepted eagerly, and just before the time for my own departure I accomplished that defrauding of the company who paid me to protect their interests.

"You don't want thanks!" he exclaimed, when I left him in the dusky car with a jug of water and some crackers. "As for shaking hands," he ended, shuddering, "you have guessed what mine have done!"

I was going whence he had come, as I had been summoned to Trinidad by the division superintendent at that point. I should soon be familiar with the details of poor Rolfe's tragedy. I reflected, as I settled myself in the smoker. The conductor took a seat beside me when we were fairly off, and remarked that we had escaped the wonted fight to dispossess secreted tramps.

"There is one tramp, however, supposed to be tramping this way, whom I should like to meet," he continued. "Terrence Rolfe."

"Terrence Rolfe?"

"Young engineer—you know him, Watts; you went down the road with his party a few months ago."

"Great chum of a fellow named Crosby?"

"Just so, and engaged to Crosby's sister. Well, sir, he skipped out of Trinidad last week, under the belief that he had killed his friend—"

"The belief? Is Crosby not dead?" I interrupted, something children call a "lump" choking my throat.

"Neither dead nor likely to die, unless he brings on brain fever fretting over Rolfe's disappearance."

"When do we reach a telegraph station?"

"Another hour yet. Where is Rolfe, you fraud?"

"Tell me your story, and I will tell you mine."

This was his story:

The company projected that summer a branch line connecting Trinidad with a town fifty miles distant, and the engineers who were employed to lay it out camped in the neighborhood. They ran up to Trinidad for every chance of fun, and thus made the acquaintance of a handsome Mexican girl, Juanita Valdez, with whom Crosby became bewitched. Rolfe persistently sought to save his friend from his clutches, and his efforts transformed the fancy she at first manifested for him into the hate such a woman cherishes toward the man for whom she would have shaved had he liked her. One night, after a dance, Rolfe, while urging Crosby's return to camp, affronted Juanita, who, seeking a possible renown as the cause of a tragedy, stimulated her lover's resentment until he drew a revolver. There was a struggle, the revolver was discharged in Rolfe's grasp, and his chum fell apparently dead. When the police arrived Crosby showed no sign of life. Juanita glibly accused Rolfe, and he, who seemed to have gone quite mad, fled from his not very energetic captors. Crosby was taken to the hospital, where he remained

many hours insensible. Then, like the chap in the miracle, he "became of right mind." He refused Juanita's attentions, and, sending for the authorities, declared that Rolfe had been actuated throughout the affair by a devotion to him and his family which he feared had led to a catastrophe.

"Put the police to shame and produce your man," concluded the conductor.

Forthwith I confessed the plot whose disastrous result was carrying poor Rolfe as fast as steam could take him away from the one remedy for his despair. I did not share Crosby's dread that he would attempt self-destruction, because I knew him to be sustained by his wild scheme of escaping arrest until he had made his defense to his sweetheart. But those long hours of vain agony were bitter to anticipate, even from the calm distance which lies between us and another soul's misery.

The conductor and I combined our wits and our familiarity with the company's regulations to intercept his journey. The halts of freight-trains, however, depended upon many circumstances, and were irregular beyond our power of reckoning. The only possibility of finding him was to telegraph to probable stopping-places of that freighter, and to its ultimate destination. This we did at the next station, but it was hours after our arrival at Trinidad, and long past midnight before I received any reply. The dispatch informed me that car three hundred and sixty-nine was not with the freighter, and that train-hands had reported it to have been blunderingly left at Wigwam.

Such uncertainty was unlikely to relieve Crosby's suspense, even if so late a visit would have been permitted at the hospital. I sent a telegram to Wigwam and betook myself to bed.

Before breakfast on the following day I walked again to the station. A freight-train was crawling in, with half its ugly length slowly winding around a curve. Instinctively I glanced over the line of box-cars, one of whose compeers so occupied my thoughts.

Surely there was curious similarity in that combination of numbers on the last. Or did the distance deceive my sight? Or was I growing nervous?

As I stared, shadlug my eyes with my hand against the glare of sunlight, the door was pushed open and a man sprang from the car. He stumbled a step or two, fell, and scrambled to his feet.

Never in college races had I run so fast as I ran then; nor for so high a stake. Another instant and Rolfe would recognize Trinidad. He would believe that a fiendish trick of treachery had brought him back whence he had fled. Here, where those steadily revolving wheels suggested swift escape from his agony, would he curse God and die?

While I live I shall remember the tall, swaying figure, the blazing eyes which confronted me as I rushed toward him.

"Not yet, you devil!" he cried.

He crunched to dash under the train. But my arms clasped him.

Despair is mighty though fettered by hunger and exhaustion. He would have got away from me, except that a couple of train-hands sprang to my help.

When finally he lay limp and panting in the hold of my assistants, I found breath to speak.

"Rolfe!" I gasped. "Listen! God upsets men's plans, not a devil. Against your will and mine you have been brought back here because Crosby is alive! He will recover as soon as he knows that you are safe."

Yes, he married Crosby's pretty sister three months later, and I was best man at their wedding.

SIZE OF A SPIDER'S THREAD.

Leeuwenhoek, the first microscopist, wrote in 1685 as follows: "I have often compared the size of the thread spun by full-grown spiders with a hair of my beard. I placed the thickest part of the hair before the microscope, and, from the most accurate judgment I could form, more than a hundred of such threads placed side by side could not equal the diameter of one such hair. If, then, we suppose such a hair to be of a round form, it follows that 10,000 threads spun by the full-grown spider when taken together will not be equal in substance to the size of a single hair. To this, if we add that four hundred young spiders, at the time when they begin to spin their webs, are not larger than one full-grown one, and that each of these minute spiders possesses the same organs as the larger ones, it follows that the exceeding small threads spun by these little creatures must be still four hundred times slenderer; and consequently, that 4,000,000 of these minute spiders' threads cannot equal in substance the size of a single hair."—Microscope.

CENSUS OF THE WORLD.

A census of the world seems impossible, but it is going to be undertaken. The unparalleled labor is to be one of the gigantic projects to celebrate the advent of the twentieth century, and it is safe to say that a more stupendous undertaking has never before been devised. The scheme had its real inception at the biennial meeting of the International Statistical Institute, recently

held at Berne, Switzerland, where a committee was appointed to consider ways and means. The first step in this important committee's labor was to enlist the interest and aid of Li Hung Chang. They met him when he was in Berlin, and secured his promise of his influence in China. In no nation will the work of census-taking be more difficult than in China. Anything approximating an accurate census of the population of the earth at the present time is, without doubt, an impossibility. In addition to the poles, there are many spots on the earth that have never been visited by the explorer, and others from which a census enumerator never would get away alive. The population of the earth is now estimated at 1,700,000,000—guesses founded upon the observation of travelers, and upon the guesses mentioned in treatises given by such countries as China, Persia, Arabia and Turkey.—London Mail.

THE USES OF FRUIT.

Of all the classes of nature's edible productions that of fruit is most pleasing to the senses. That fruit alone will not sustain life for a prolonged period is true, but that the organic salts and acids of fruit are necessary to the maintenance of perfect health is equally correct. Prof. A. R. Elliot ("Dietetic and Hygienic Gazette," November) summarizes the uses of fruit as follows:

1. To furnish variety to the diet.
2. To relieve thirst and introduce water into the system.
3. To furnish nutriment.
4. To supply organic salts essential to proper nutrition.
5. To stimulate the kidneys, increase the flow of urine and lower its acidity.
6. To act as laxatives.
7. To stimulate and improve appetite and digestion.
8. To act as antiscorbutics.

Concerning the mode of preparation, ripe fruits as a rule do not need to be cooked, and are much more palatable and equally nutritious in the uncooked state. The proper time to eat fruit is either at the beginning of the meal or between meals, when they aid digestion and exert the greater laxative effect. Taken at the completion of the meal, they dilute the gastric juice and tend to embarrass digestion.

THE DOOR-SPRING.

Truly in no minor feature is the progress of civilization more apparent than in the present common use of the door-spring. We don't shut doors now nearly as much as we used to; we don't stop to shut them. We are spared that trouble and we save time. We open the door and push on through and leave the door to take care of itself. In the time that it would have taken us to close it we are six, eight, ten feet off; but the door is not neglected; it shuts itself, calmly, quietly and with certainty, as the man marches away. There is less slamming of doors now than ever, and fewer doors are left open; and the saving of time effected by the use of the self-closing door is in the aggregate tremendous.

A WORLD-FAMOUS SPRING.

Among the "knobs" of southern Indiana there is a spring of water which is a strange and marvelous creation of nature. It is located in a beautiful little valley at the foot of a giant limestone hill, covered with a dense primeval forest. This spring reaches far down into the unfathomed depths of the earth. In finding its way upward it is supposed to filter through beds of iron, sulphur, magnesia and stratas of other minerals and rocks, and finally bursts forth in a strong and constant stream of cold water as clear as the purest crystal. By some mysterious workings known only to an all-wise Creator, the water which flows from this spring has a wonderful effect upon the human system. It was known and prized by the Indians: the wild beasts even seemed to have known its properties. It was known as a famous lick for deer by hunters in pioneer days. The early French settlers were the first white men to visit this spring, and they later established a mission there. For years the only route to the spring was over a rough stage-road for forty miles. Later a railroad passed within eighteen miles of the spring, which largely increased the number of pilgrims who sought the living waters annually. By and by some enterprising fellow built a little hotel, and later the railroad built a line direct to the spring. Now a magnificent hotel, with electric light and steam heat, stands upon the hillside and overlooks the world-famous mineral spring "Pluto." Thousands of people suffering from disordered liver, stomach and kidneys, and their kindred troubles, journey thither for a short stay, and go away slugging the praises of "Pluto" spring. Its healing properties are so powerful and so effective that it sounds like a fairy tale to relate the numberless cures that have been made by drinking the cold, clear spring-water.

The hotel accommodations are splendid and the rates moderate. Those seeking health would do well to write to the French Lick Springs Co., French Lick, Orange County, Indiana, for their circulars. The place took its name from being a deer-lick and a mission of the early French settlers.

NATIONAL DEBTS OF THE WORLD.

It is a well-known paradox that a country cannot be prosperous without a certain amount of national debt. This may be disputed, but it is certain that hardly a civilized nation is to be found to-day without the burden of national debt. The "Handels-Zeitung," New York, compiled some interesting statistics on the subject, from which the "Literary Digest" quotes the following:

"The national debt of the world is now \$29,000,000,000, while in 1875 it was \$23,750,000,000. France has the distinction of leading the world in this regard with a debt of \$6,000,000,000, followed by Great Britain with \$3,300,000,000. The third on the list is Austria-Hungary with \$3,030,000,000, while Russia is fourth with \$2,875,000,000 and Italy fifth with \$2,530,000,000. Spain comes next with \$1,395,000,000, and the United States is seventh with \$996,141,952. Germany has a debt of only \$420,000,000.

"Spain owes comparatively the largest sum to foreigners, while in France the great bulk of the papers are in possession of the Frenchmen themselves. But nearly every other nation is indebted for enormous amounts to its own subjects. France takes the lead as a lending people on account of the good financial standing and the saving propensities of its people. The example of France seems to confirm the proposition that a national debt is a good thing for the prosperity of a people, for in that country the national debt and the general prosperity of the populace have steadily advanced in recent decades in equal proportions.

"The growth of national debts can be seen from the following table, in which the figures for twenty years ago are given in the first column, those for to-day in the second column:

France	\$4,500,000,000	\$6,000,000,000
England	3,900,000,000	3,300,000,000
Austria-Hungary	1,750,000,000	3,000,000,000
Russia	1,700,000,000	2,875,000,000
Italy	1,950,000,000	2,530,000,000
United States ..	2,220,000,000	996,141,952
Spain	1,375,000,000	1,395,000,000
Germany	1,000,000,000	420,000,000
Australasia	230,000,000	1,200,000,000
Turkey	675,000,000	900,000,000
Portugal	345,000,000	765,000,000
India	650,000,000	635,000,000
Brazil	475,000,000	590,000,000
Egypt	375,000,000	530,000,000

"Rather remarkable is the increase of debt in Australasia, especially over against the repeated statement of Great Britain that its loyal colonies enjoy a higher degree of prosperity than do those that have become independent. Japan and the Argentine Republic belong to the states that have in recent years been contracting debts on a large scale, the former now having \$235,000,000 and the latter \$370,000,000. Borrowers on a somewhat smaller scale are Belgium, with a debt of \$445,000,000, Holland with \$460,000,000, Canada with \$225,000,000, an increase of \$100,000,000 since 1875. The total debt of Great Britain, including the colonies, is \$5,485,000,000, almost equal to the debt of France.

"One reason for the enormous increase of national debts is probably the fact that money is now much cheaper than it was twenty years ago. At present the total sum of interest to be paid on national debts is \$1,115,000,000, while twenty years ago it was \$1,000,000,000, although the total debt at that time was \$5,000,000,000 less than it is at present. In 1875 Spain and Mexico paid as high as fifteen and eighteen per cent interest. Although the national debt of France is so enormous, yet it pays comparatively the smallest amount of interest money, namely, \$185,000,000, while Great Britain pays annually \$125,000,000; Russia, \$120,000,000; Italy, \$117,000,000; Spain, \$56,000,000; Austria-Hungary as much as \$186,000,000. The latter country, accordingly, pays more interest than France, although the French debt is twice as large as that of the Austrian empire. It is interesting to note that each inhabitant of France must, on the average, pay each year \$4.75 interest on the national debt; each Russian, \$1.29; each Englishman, \$3.15; each Austrian, \$7.50; each Italian, \$3.80; each Spaniard, \$3.25; each American, 42 cents, and each German, 33 cents."

FARM POWER.

The practice of grinding feed, and in many sections steaming and cooking the same, is rapidly growing in favor with the most progressive farmers. This necessitates the use of some good, reliable power, as well as some means for steaming or cooking the feed. The well-known firm of James Leffel & Co., Springfield, Ohio, are building a line of steam Engines and Boilers largely used and specially well adapted for such service. In addition to furnishing necessary power for grinding feed, sawing wood, shelling corn, etc., their outfits can also be arranged whereby steam is had at the same time for other service, such as warming water, cooking feed, etc. A new pamphlet, "D," has been issued by this company, fully illustrating and describing their latest improved work in the Engine and Boiler line. Copies will be sent free to parties interested, on application to the company, and any readers needing such power will do well to obtain a copy and correspond with them before purchasing elsewhere.

DECADENCE OF THE MEDIEVAL TRADES-UNIONS.

The moral havoc wrought by these monopolies was greater even than the industrial havoc. It crushed all feelings of justice and humanity, making its victims more grasping and cruel than Shylock; it led them to the practice of every trick and deception of a Newgate sharper to evade the laws; it stirred up a contention that rivaled the quarrels of the Guelphs and Ghibellines. Apprentices became no better than serfs and slaves. They were not merely pitilessly fined and brutally punished; they were often left in ignorance of the craft that they had purchased the right to learn. In that frightful social and moral revulsion following the long and devastating wars of the sixteenth and seventeenth centuries the corporations became more determined than ever to maintain their industrial aristocracy and monopoly. They refused to admit any trade less ancient and honorable than their own to the rights and privileges of the law; they soiled themselves by contact with no person of illegitimate birth; and in their savage and relentless pursuit of persons engaged in unauthorized traffic they invaded the homes of contraband workmen, confiscating both their tools and the hidden products of their toil, leaving them and their families destitute and starving. To such absurd lengths was the creation of corporations carried for the production of new taxes and new places for court favorites, that occupations like the teaching of dancing, the selling of flowers and the catching of birds were organized, and homogeneous occupations like the hatmakers' and carpenters' were divided and subdivided beyond the comprehension of the modern mind.—Appleton's Popular Science Monthly.

KEGS OF ONIONS THE WEAPONS.

Shortly before the Revolution, when the air was heavily charged with forebodings of the approaching struggle, old Major Putnam happened to be in Boston. The major disliked the redcoats, and sometimes inveighed against their arrogant superciliousness in no gentle terms. One day an officer of his Majesty's regulars overheard Putnam assert that the provincial army, untutored in arms as they were, would fight with the courage of trained soldiers. The officer resented the assertion, and after some hot words challenged the major to a duel, provided he dared to fight.

"Dare!" shouted Putnam. "Why, at any moment; but I choose the weapons."

"Name them," laughingly replied the officer.

"Two kegs of gun-powder; the time, tomorrow; the distance, ten paces; the fight to be as follows: You sit on one keg, I on another; a slow fuse to be attached to each and lighted, and the one who holds out the longest shall be declared the winner."

There was nothing for the officer to do but accept the unusual weapons, and on the following day at the appointed time and place the combatants took their seats upon the kegs of powder. The fuses were lighted and began sputtering, rapidly approaching the kegs. The officer was deathly pale, and watched the growing danger with dilated eyes. At last he could stand it no longer, and with a leap left his keg and raced like a madman out of sight. When he had gone Old Putnam laughingly kicked the burning fuse away, and disclosed to his friends a keg of onions. When the matter came to light the officer was subjected to laughs and gibes of the entire command.—Harper's Round Table.

BOUNTIFUL CROPS

Are now harvested in Oklahoma and Kansas on the line of the Chicago, Rock Island & Pacific Railway.

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EXCUSED.

A pleasant story of her youth is told by an old lady whose early home was in Concord, Mass. She was on her tardy way to school, crying in anticipation of disgrace and possible punishment, when a deep voice by her side said:

"What is troubling you, my child?"

Between her sobs Annie explained.

"I will write a note to your teacher asking her to excuse you," said the stranger, kindly.

The little girl protested. He did not know her teacher. It would be of no use. But the big, black-haired man had written a few words on a page of his note-book, and, tearing out the leaf, handed it to the child.

"If you give your teacher that, I think she will excuse you," he said, smilingly.

Still unbelieving, the little girl handed the scrap of paper to her teacher, who read its contents, and promptly excused the delinquent. The note read:

"Will Miss — excuse Annie for being late, and oblige her most obedient servant,

"DANIEL WEBSTER."

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JOHN SHERMAN'S FIRST MEETING WITH LINCOLN.

Secretary Sherman says he never will forget his first meeting with a president. It was shortly after Lincoln's inauguration, and he attended a public reception, fell into line, and waited an hour or two for a chance to shake hands with the great emancipator.

"During this time," says Mr. Sherman, "I was wondering what I should say and what Lincoln would do when we met. At last it came my turn to be presented. Lincoln looked at me a moment, extended his hand, and said:

"You're a pretty tall fellow, aren't you? Stand up here with me, back to back, and let's see which is the taller."

"In another moment I was standing back to back with the greatest man of his age. Naturally, I was quite abashed by this unexpected evidence of democracy.

"You're from the West, aren't you?" inquired Lincoln.

"My home is in Ohio," I replied.

"I thought so," he said; "that's the kind of men they raise out there."—Chicago Times-Herald.

THE NEW TEN.

Matrimony has ten commandments. These were studied out by Theodore Parker shortly before the day of his wedding. They took the form of ten beautiful resolutions, which he inscribed in his journal. They are as follows:

1. Never, except for the best reasons, to oppose my wife's will.
2. To discharge all duties for her sake freely.
3. Never to scold.
4. Never to look cross at her.
5. Never to worry her with commands.
6. To promote her piety.
7. To bear her burdens.
8. To overlook her foibles.
9. To save, cherish and forever defend her.
10. To remember her always in my prayers. Thus, God willing, we shall be blessed.

ONLY RECENTLY A POOR FARMER.

Clarence J. Berry is the Barney Barnato of the Klondike. He took \$130,000 from the top dirt of one of his claims in five months. He kept it all but \$22,000, which he paid to his miners. He did not have to give his wife even so much as pin-money. She had a

pan of her own. She would occasionally get time from her sewing and mending to drop around to the dump. She sifted out \$10,000 or so in her spare moments. This was her amusement in the strangest year's honeymoon that is recorded. The two started fifteen months ago as bride and groom. She was the devoted sweetheart of a poor Fresno farmer. They have returned to San Francisco with all kinds of gold-dust, nuggets and coin. They have millions in sight, and behind the millions is a pretty romance.

CRIME INCREASING.

People do not realize how the tide of criminality is rising in this country. According to the census reports, we had one prisoner behind the bars for every 3,442 of population in 1850. In 1890 the ratio had risen to one in 757. By this time it is probably one in 500. Statistics showed a year ago that in my own state of Massachusetts one in every 225 inhabitants over sixteen years of age was in prison, mostly young men. The floating criminal population in this country, in and out of jail, is estimated at three quarters of a million.—D. L. Moody, in Sunday-school Times.

HOBSON'S CHOICE.

The meaning of the above proverbial expression is explained by the following reputable account of its origin: "Tobias Hobson was a carrier at Cambridge in the seventeenth century. He kept a livery stable and insisted upon the students, who were his most generous customers, taking his hacks in consecutive order. Hence arose the term, 'Hobson's choice,' meaning 'this or none.' Milton has some feeling verses on 'The University Carrier,' beginning:

"Here lies old Hobson; death has broke his girt."

CONSUMPTION CURED.

An old physician, retired from practice, had placed in his hands by an East India missionary the formula of a simple vegetable remedy for the speedy and permanent cure of Consumption, Bronchitis, Catarrh, Asthma, and all Throat and Lung Affections, also a positive and radical cure for Nervous Debility and all Nervous Complaints. Having tested its wonderful curative powers in thousands of cases, and desiring to relieve human suffering, I will send free of charge to all who wish it, this recipe, in German, French or English, with full directions for preparing and using. Sent by mail, by addressing, with stamp, naming this paper, W. A. NOYES, 520 Powers' Block, Rochester, N. Y.

Our Household.

ONLY SIX MONTHS MORE.

Six months from now I shall pay all bills;
Of this there can be no question.
And I'm sure that about that time I'll be
Relieved of this indigestion.

Six months from now in the bank I'll place
The cash that I've been saving.
For by that time I am sure I'll be
A way to fortune paying.

Six months from now, or about that time,
I shall quit the habit of smoking,
And that is the time my life will be
A continual round of joking.

That is the time (six months from now)
When I shall not have to hurry.
All things being adjusted, why, then
There'll be no cause for worry.

Six months from now! Oh, glorious time!
Am I impatient? Never!
For this glorious time I'll wait and wait,
If I have to wait forever.

HOME TOPICS.

PUMPKIN PIE.—Cut the pumpkin into halves, then into slices; peel, cut up into pieces about two inches long, and pack them in a steamer. Set the steamer over boiling water. When the pumpkin is tender, so it can be easily pierced by a fork, drain all the water possible from it, put the pumpkin into a preserving-kettle, and set it on the back part of the stove where it is not very hot. Let it cook here until it is quite dry, stirring it often to prevent scorching, and then rub it through a colander. It is best to cook the pumpkin the day before you wish to make pies. It will keep several days in a cool place. To a pint of the sifted pumpkin take three eggs, a teaspoonful of sugar, a half teaspoonful of cinnamon or allspice, ground, a half teaspoonful of ginger and a half teaspoonful of salt. Beat these together to a cream, and then add a quart of milk. Line the pans with a good but not very short crust, fill with the prepared pumpkin, grate a little nutmeg over the top, and bake until the pie is firm in the center.

POISONOUS PLANTS.—It is a lovely time of the year to be out of doors, in the fields and woods, but one should be on the lookout for poisonous plants, as the results from handling them are often quite severe. Poison-ivy, or poison-oak, as it is sometimes called, and poison sumac, or dogwood, belong to the same family. The poison-sumac is a shrub, growing from six to eighteen feet high. The stem is smooth, or nearly so, and the leaves composed of seven to thirteen thin leaflets. It grows in moist, swampy places. The poison-ivy climbs by rootlets over rocks or up the sides of trees. It is easily distinguished from the Virginia-creeper, as it has three leaflets, while the Virginia-creeper has five. The leaflets of the poison-ivy are rather downy underneath, and are sometimes variously notched and sometimes entire. Some people are particularly susceptible to the poison of these plants, so much so that the effluvium will cause poi-

prevent bad effects even when one has touched a poisonous plant. It is wise to take this precaution whenever one has been where the plants might be. The best remedy I have ever tried for the irritation produced by these plants is to bathe the affected parts with a mixture of soap liniment and oil of sassafras, which any druggist can prepare. I have been told that simply bathing the affected parts with water as hot as it can be borne, and repeating it every hour or two, will allay the intolerable itching, stop the spread of the inflammation, and effect a cure in a day or two. This would certainly be worth a fair trial. **MAIDA McL.**

LETTER-BOX.

That is an unlucky person who does not collect in his lifetime a few choice letters which he wishes to cherish as he would the ashes of a dear friend. A lady told me recently that she found the letter which her father wrote to his wife's parents announcing the birth of a little girl, and that little girl was herself, now grown to be middle-aged. Imagine how she felt as she perused those pages! Such a letter

person who sees a well-executed piece must fall in love with it. The trouble with most of the carvings illustrated is the fact

life might be saved, many a "mysterious providence" averted, if only a little more common sense were used in the care of the



as that is worth keeping, and love letters from the man you married, or from those you did not. A beautiful casket is worthy

part of the page our editor has allowed a life-sized representation of the top of this exquisite box. It is of chip-carving, with all the variations allowed by this the simplest branch of wood-carving. In drawing the design upon the wood the nicest accuracy must be observed. A pair of compasses is necessary in getting the circles exact.

This casket, lined with velvet and finished with a brass lock, will be a thing of beauty from generation to generation and a joy to all who appreciate true art.

K. K.

LINEN AND BRAID CENTERPIECE.

Where one cannot embroider well it is best to keep to plain sewing; and in this combination of braid and linen every one could accomplish a beautiful decorative piece of work. To form the squares baste another piece of the material on the main piece, and hemstitch all around the edges, and then put on the braid decorations. It must first be basted and then sewn firmly down, gathering it at places where turns or curves must be made. If only a corner is done in this manner it makes a very pretty centerpiece.

TWO MOTHERS.

That many a baby suffers tortures at the hands of an ignorant young mother or a careless nurse no observant person can deny, and this is particularly so during the long, hot days of summer. Many a child's

baby, who cannot speak to tell of its needs or feelings, and who, if it cries, is jolted, patted or dosed, when nine times out of ten a little sensible attention, such as an older person would appreciate, is all it requires.

We call to mind one young mother and her six-months-old babe, who, though very fleshy, was well and good-natured all the summer, although the season was a long and trying one. His clothing consisted of the thinnest of all-wool skirts, low-necked and short-sleeved, but long enough to come well down over the abdomen, napkin, and short, loose slip or wrapper of lightweight tennis-flannel. If the mornings or evenings were cool a light flannel or tennis flannel skirt was added.

The mother sensibly forbore holding him any more than was absolutely necessary, but taught him to lie much of the time on a folded comfort on the floor. Occasionally, when the afternoons were particularly hot, his little slip was removed, and he rolled and kicked in perfect comfort attired only in napkin and shirt.

The greatest of care was taken with his bottle to keep it perfectly clean and sweet, and during the entire hot season he was fed nothing but pure, perfectly sweet milk, diluted according to the doctor's directions. His bottle was given him as he lay upon the floor, so he was spared the warmth of the mother's body while eating; and when he went to sleep he was left on the comfort on the floor, with a square of tennis-flannel thrown over him, and awakened refreshed and happy; not hot, perspiring and cross, as is so often the case. His daily bath was never omitted, and if a change in temperature came suddenly, as it so frequently does during the summer, his clothing was immediately attended to, so that he was never allowed to become chilled nor warm enough to perspire unduly. Although he cut several teeth during July, August and September, he was well and happy, and his mother by her wise treatment and rare good sense saved herself much overwork and worry and was able to enjoy her baby all the time.

Not far away was another mother whose baby was about the same age, and who cried, fretted and worried the most of the time. It was attired through all that hot summer in a long-sleeved flannel shirt, such as it had worn during the winter, a flannel skirt and muslin dress, and as a consequence was constantly broken out with the heat, which every drop of perspiration irritated, and every movement of its little body increased the chafing of its close-fitting, heavy shirt. For hours at a time would the mother rock it or walk the floor holding it closely clasped in her arms, in her vain endeavors to quiet its plaintive wails, the warmth of her body only increasing its discomfort. When tired nature brought forgetfulness in sleep, it was put to bed in a closed room, covered with a crocheted afghan, "for fear of drafts," and the mother could not understand why baby slept so little and awakened so cross and fretful.

When remonstrated with for keeping it so warmly dressed, she replied that baby was so delicate and took cold so easily that she must keep it warmly dressed, and could not be made to understand that excessive clothing weakened the entire system. Finally the little thing became so enervated that it could stand the strain no longer; its whole system becoming debilitated and its digestive organs weakened in sympathy, and during the early



soning when merely passing near them. Sometimes immediate washing with hot, strong soap-suds or ammonia-water will

to enshrine these precious relics. I have often expressed enthusiasm for objects made of carved wood. It seems that every

days of September it fell a prey to bowel trouble, and in three days' time passed away, leaving the mother's heart desolate as she bewailed the strange dealings of Providence.

Should another little life be placed in her keeping, it is to be hoped she will carefully study its needs and requirements, and learn in time that too often a mother's ignorance is more responsible for a baby's demise than the dealings of a "mysterious Providence."

CLARA S. EVERTS.

DRESS FOR ELDERLY WOMAN.

Too many women when they get into middle life begin to think themselves too old to dress. As age approaches your dress should take on a more elegant look in the way of material, while you can select a quieter style of making it. The one we illustrate is of heavy black satin,



the perfectly plain skirt relieved by the panel in front of black velvet ribbon over cream-white satin and edged with heavy jet. The waist, of cream-white Liberty silk or satin, accordion-pleated, with a corselet of black satin, and shoulder-collar and revers trimmed with the jet. Two costumes could be made of this by having a black pleated silk waist also, and when that is worn leave off the white trimmings.

HOME DRESSMAKING—SKIRT-MAKING.

Handle the sections of the skirt carefully after cutting, as the bias edges stretch easily. Baste the seam of the skirt with rather short stitches, beginning at either bottom or top, but always with that section which has the most bias edge uppermost or toward the sewer. If the pattern is all right, and the cutting has been carefully done, the seams will come out even both at top and bottom. Seam with the machine, laying a strip of lining selvage uppermost on all bias seams, the raw edge of the strip coinciding with the raw edges of the sections being seamed. This stay-strip need not be basted, but should be carefully held in place while seamed. Seams should be true and straight, as defects are sure to be seen if they are made. Finish seams by overcasting edges of each section, so that the seams may be pressed open.

Press all seams very carefully, being sure that the sections do not lie slack while the seam is being pressed, as there may be a crease pressed into the skirt near the seam.

Finish the placket on one side of the opening with a fly, and on the other with a facing of the dress material. The band of the skirt should be of such a length as to allow the skirt to lap only over the fly. Put a pocket in a convenient seam with a tape attached to the upper inside corner. Fasten the other end of the tape to the top edge of the skirt, in such a place that the weight of the pocket will be on the tape, not on the seam.

Gather or pleat the top of the skirt at the back, adjusting it to the facing of the band and basting securely in place. Try on the skirt and make any necessary changes. If required, put in elastic to prevent back fullness falling forward. Baste on the outside of the band and seam. Take out band-bastings and turn in edges of both outside and inside of band and baste together. Stitch both edges of the band. Very narrow bands are most convenient, being easily hidden by the narrow

belts now in vogue. On the fly end of the band put two eyes; one on the extreme end, the other about two inches from the end, just at the edge of the fly where it joins the skirt. Place hooks to correspond on the other end of the band.

Two hooks may be sewn on the outside of the band for belt-securers, or to hook into eyes on the inside of waist at the back.

Item a facing of lining over the pressed open seam at the bottom of the skirt, to cover the raw edges of the haircloth stiffening. Face the bottom with a strip of velveteen, allowing the facing to show on the right side as a piping, not a binding. Press the skirt throughout on the wrong side, put tapes on the band with which to hang the skirt away, and the skirt is complete.

If canvas stiffening is used, it should be seamed separately, the velveteen stitched on as a facing to the right side of the stiffening. Then apply the stiffening as a facing, allowing a piping of the velveteen to show on the outside of the skirt.

LUCY C.

HOUSEHOLD ITEMS.

"One of the household ambitions of my life has been to be able to purchase cheese-cloth by the bolt," said an energetic, tidy housekeeper to me one day when we were discussing topics of home nature in general. "I would like an unlimited supply of it, for dish-cloths, tea-towels, dust-rags and uses too numerous to mention. It is such a ready absorbent, washes so easy and keeps so white. Why, its uses are legion. But at four and five cents a yard I have never felt justified in using it as promiscuously as I would wish."

In reality there is nothing nicer for the many uses mentioned, and many more. Long curtains of it were once a part of an unpretentious little dining-room furnishings, and having done service there for three seasons, the cloth was utilized in various ways, and we readily echoed the wish that we might have it by the bolt.

A fairly good substitute for cheese-cloth is the sugar-sacks that may be had at any grocer's at the rate of two for five cents. They are usually picked up pretty close, though, and to get them it becomes



necessary to leave an order for a certain number to be saved. There is more than a square yard of cloth in each sack, and in weave it is very like cheese-cloth. It soon bleaches out white, and is a very desirable kitchen and dining-room article. Housekeepers often make from these sacks very pretty white aprons for "tea-time" wear, or aprons to use while baking. We buy a number of them every season, and find uses innumerable for them. Our supplies of granulated sugar come to the grocers put up in this sacked form, and housewives are so generally coming to know of them and their merits as a household article that it is many times impossible to get them.

IVORY SOAP

Divide a cake with a stout thread and you have two perfectly formed cakes of convenient size for the toilet

THE PROCTER & GAMBLE CO., CINTI.

Wash-day is losing much of the dread that came with it since we adopted the plan of having small washings and more of them. Incompetent help is the rule rather than the exception. Girls lack executive ability and the good judgment and management that is necessary to the successful running of the wheels of the household machinery, and the work is sure to drag unless the mistress of the home is herself right at the helm every hour of the day. It not infrequently happens that the mistress is otherwise engaged much of her time, and doubtless physically unable to be always at the post of supposed duty. She has then to manage the best she can, and new ways are resorted to for lessening and hastening the work along. Wash-day became a dread day in reality, for though neither strong enough to be in the kitchen and laundry nor having the time to spare from other duties, it was an absolute necessity that we spend the better part of the forenoon there, if the weekly washing was out of the way before dark. Nor were the washings large with but three in the family. Mismanagement, slow motions and partial indifference would account for it all. But we worked a change that has somewhat revolutionized all this. Every morning, or second morning at the farthest, a small tub of suds is prepared and the soiled articles of clothing are washed out. They are run from the suds into scalding water, rinsed in cold water, and dried. Many things require no further washing, and are ready for use again. White shirts, skirts, fine table-cloths and napkins and all such articles are folded when dry, and when wash-day comes they are ready to be put into the boiler with a cold suds to start them, scalded and rinsed, when they are white and ready to be laundered. Fifteen or twenty minutes each day suffices to wash all the articles that have accumulated, and a general wash-day need not then come nearly so often. Kitchen towels, every-day underwear, colored shirts and aprons and dresses are quickly washed out, and the every-day napkins and doilies are soon ironed and out of the way again. Many such doilies are in use, and by covering the entire top of the table with them a white cloth may be made to do service and be kept clean for many days, and the table looking fresh and neat as well. Enough starch to give gloss and firmness is added to the last cold rinse-water for table-cloths and doilies. The kitchen aprons and dresses, roller-towels and tea-towels, underwear and all such common articles of the wash are not ironed. Time, strength and fuel are saved, all to be employed to a better purpose.

To keep ants out of the lard-jar we found a very difficult undertaking. They have a particular penchant in that direction, and pounds of lard have been ruined through their depredations. Taking the jars to the darkest corner of the cellar produced no effect. But when the jars were set into the wash-tubs, each tub supplied with a pail of water, we had no further trouble with the ants. When the tubs are needed they are placed upon the cellar bottom for the few hours that the tubs may be in use, when they are again set into the water and jars covered with paper and plates to keep out the dust. Other articles of food of which the ants are particularly fond may be placed in safety on the covered jars.

All the milk except the home supply, which is small, is sent to the creamery daily. The amount kept at home is put into a glass fruit-can, the can slipped into a clean cloth sack made for the purpose, well wet with cold water, then slipped down into the house well-water cistern until the bottom of the jar and cloth touches the water. A broad cloth string pieced together from new strips of muslin is pinned to the sack. The milk keeps cool and sweet and raises cream for tea and berries.

More cream being needed, it is taken from the night's milk in the creamery-can, and put into the cistern as is the can of new milk. Butter is put into an earthen dish, covered over with a thin cloth deep sprinkled over with barrel-salt, covered with another cloth and papers, and also hung in the cistern. A refrigerator would be preferable, but that is among the things to be in the "good time coming." A refrigerator and ice-house should be among the farm belongings of every farm, and when they come to this one we are confident that the participation will be in every respect equal to the anticipation.

ELLA HOUGHTON.

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ARE NOT TO BE WASHED.

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If not found at the stores send six cents for sample collar and cuffs, naming style and size. A trial invariably results in continued use.

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for 30 days in your own home and save \$10 to \$25. No money in advance. \$30 Newwood Machine for \$23.00 \$50 Arlington Machine for \$19.50 Singers (Made by us) \$8, \$11.50, \$15 and 27 other styles. All attachments FREE. We pay freight. Buy from factory. Save agents large profits. Over 100,000 in use. Catalogue and testimonials free. Write at once. Address (in full), CASH BUYERS' UNION 158-164 West Van Buren St., B-7, Chicago, Ill. Mention this paper.

ISAAC THOMPSON'S EYE WATER

Relieves SORE EYES

Our Household.

THE FLOWN BIRD.

The maple leaves are whirled away.
The depths of the great pines are stirred;
Night settles on the sullen day.
As in its nest the mountain bird,
My wandering feet go up and down,
And back and forth, from town to town,
Through the lone woods, and by the sea,
To find the bird that fled from me.
I followed, and I follow yet;
I have forgotten to forget.

HOW TO GROW A PALM, AND THE CARE OF IT.

UNLESS you have a large stock of patience, and a fondness for experiment, I would not advise any one to try to grow palms from seed. I have known the seeds of certain palms to lie in the ground for more than a year before sprouting.

It is far better to purchase a small palm of the variety you admire, and grow that to the desired size. I bought one less than two feet high from the florist, and in three years disposed of it as being too inconveniently large for the house. Their culture is the simplest thing in the world, and as they grow the year round, it is sometimes necessary to check or dwarf them to keep them a nice size for the house. The varieties most common for house culture are *Areca lutescens*, *Livistona sinensis*, or fan-palm, *Raphia flabelliformis* and the several varieties of the date-palm, of which latter family *Phoenix rupicola* is rather the most graceful, on account of its long and finely pinnate leaves, but *P. tennis* and *P. canariensis* are handsome and more commonly grown than *rupicola*.

Having selected your palm and taken it home, examine it, and if it needs repotting, do it at once in a rich fibrous soil that contains plenty of sand; and pray do not commit that common fault of the amateur of putting a two-foot palm in a pot the size of a small tub. I think persons who commit this error hope that by giving plenty of room from the start they will save themselves the trouble of repotting the plant for several years to come. But the soil is apt to grow sour or lose its strength from the frequent waterings,

and it is always a bad plan to have a plant in a pot too large for its needs. It is inharmonious. Plants do not love a misfit any better than human beings. Give your palms plenty of water. In India they have a saying that the coconut-palm will not live away from the sound of the sea-shore. The idea is poetically beautiful, but I think the water filtered through the sand is at the root of the saying as well as at the roots of the trees, and without doubt accounts for the milk in the coconut. Palms, as well as all other potted plants which require much water, are best kept wet by putting a plate under the pot, which serves a double purpose, keeping the water at the root of the plant and off your carpet.

In winter palms will stand all the sunshine they can get. In summer put them outdoors, under a tree if possible, where

think the real secret of keeping a palm steadily growing is frequent doses of weak liquid manure, say a pint once a week.

To dwarf a palm or keep it a desirable size for the house, simply allow it to become pot-bound, and keep it alive and green by liquid manure and top-dressings of rich soil.

So many people regard palms merely from a decorative point of view, utterly ignoring any claims they may have to sun, air and water. They place them where they will best ornament their rooms, regardless of light and air, and when they shrivel and turn yellow at the points of the leaves, wonder why palms are so difficult to grow, and why they do not retain the brilliant green they had when bought at the florist's. Nine tenths of the palms bought die of thirst or are smothered to death in close rooms.

Use your palms to decorate the nooks and corners and halls by all means, but do not keep them in such places all the time. Give them a warm half-shady position in summer, for while they love the sun, and to a certain degree it is beneficial to them, it is apt to burn holes in the leaves, especially if they are watered while the sun is shining on them. The heat of an ordinary living-room is warm enough for their winter growth, if it does not get below the freezing-point at night.

In conclusion treat your palms reasonably, and they will grow and live as long as you can give them room without taking off the roof.

JESSIE M. GOOD.

INITIALS.

There is always a charm to me about household linens, blankets and towels



marked with initials. When quite small I was obliged to learn cross-stitch lettering upon a sampler. We have always used it, and I like it. The deftness comes by long practice. At first you would have to learn upon a piece of canvas, and draw out the threads after it is done. Always use colors that will wash well. With the wash-silks of to-day one has quite a range of colors. Table-linen worked in outline-stitch in white wash-silk looks daintier than colors; but if a color is preferred, pale yellow always looks and washes well.

A few such things marked with your maiden initials will look well in your hatching-chest; and these things should be the outgrowth of years, as it is too much work and too much expense to buy all these household treasures at once. So, girls, sometimes deny yourself a ribbon or an ornament, and put the price into something for your future homes.

CHRISTIE IRVING.

CANNING CORN.

EDITORS FARM AND FIRESIDE.—Seeing your request for a recipe for canning corn, will send you one I have used with satisfaction for years. To every six quarts of corn take one ounce of tartaric acid

dissolved in boiling water; add the acid while the corn is cooking. Can in glass cans as you would fruit.

To prepare for the table, pour off the sour water, keeping a little of it, cover the corn in fresh water, let stand a few minutes, and put over the fire; and to one half a gallon of corn add one small teaspoonful of soda and two of sugar, and let it boil. If it still is sour, add a little more soda; but if it turns to yellow instead, add enough of the sour water to bring to its natural color and taste; season as you

prefer. While the cooking is just a little bothersome my family and friends often tell me they could not tell it from the fresh corn from the garden.

OLEVIA CLAMANDS.

HINTS FOR THE HOUSEHOLD.

A serviceable and practicable cover for a dining-room table when not in use is made



by purchasing an unbleached table-cloth of the required length, selecting a scroll or some large, effective pattern, and outlining this in wash-silks, the colors to harmonize with the furnishings of the room. This cloth, besides being easily laundered, makes an attractive cover.

When using cabbage for cold slaw, cut it into ribbons an hour or more before it is to be used, and let stand in ice-water until the last moment; then drain it upon a soft cloth to remove the water, and pour a French dressing over it. If once tried thus it will always be treated in this manner.

For removing the stains of fruit from table-linen, oxalic acid, javelle-water, boiling water and milk are all recommended, together with many other liquids.

When desirous of mending a piece of broken glass or china, a cement may be made by dissolving half an ounce of gum acacia in one gill of boiling water and stirring in plaster of Paris until the mixture is the consistency of a paste. Apply the cement to the broken edges with a brush, and fasten the two parts together until perfectly dry.

FRUIT DESSERTS—GRAPES.

1. Grapes Plain.
2. Iced Grapes.

In no way is this fruit so delicious as

when served daintily after having first been thoroughly cooled. The purple and white California grapes are exceedingly delicious and make a lovely dessert, when arranged artistically together in a glass dessert-dish. The ordinary purple, white and red grapes also look very dainty and inviting when arranged together in one dish, and finish off a table as only fruit daintily served can do.

Iced grapes also look well, although not a little time and pains are required. The small red Delaware grapes are perhaps the best to serve in this manner, although the small white, or they might be called green, grapes, which are also thin-skinned, serve very nicely.

Take as perfect bunches of grapes as possible, carefully look them over and remove all dirt, etc., after which they are ready for the crystallizing or icing.

Beat some white of egg well, and into it dip your grapes, bunch by bunch, placing them carefully afterward in a sieve to drain slightly. Then dip them again, bunch by bunch, into finely powdered or confectionery sugar, and place them carefully on a flat dish to harden or crystallize.

After they have slightly hardened, repeat the process, which can be repeated a third time even, if desired, if the two dippings do not give the desired thickness to the icing. Then set away in a dry place to harden. Some little time before serving place the fruit, the icing of which has by this time become perfectly crystallized, carefully into the dessert-dish in which you intend to serve the same; then put the same in a cool place, as the fruit should be served when perfectly cold to be at its best.

EMMA LOUISE HAYCK.

I consider Jayne's Expectorant the best Cough Medicine I know of. In cases of Croup, IT HAS SAVED BOTH MY OWN AND MY CHILDREN'S LIVES.—N. N. CARR, Sparrow Bush, N. Y., October 29, 1895. For Headache, take Jayne's Painless Sanative Pills.

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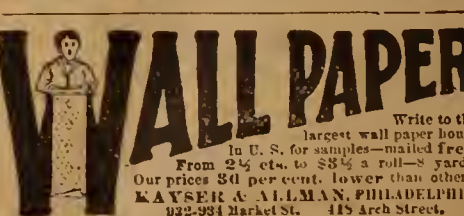
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Cured in 10 to 20 days. No Pay till cured. DR. J. L. STEPHENS, Lebanon, Ohio.

Our Sunday Afternoon.

NEARER HOME.

O'er the hill the sun is setting,
And the eve is drawing on;
Slowly droops the gentle twilight,
For another day is gone;
Gone for aye—its race is o'er—
Soon the darker shades will come,
Still it's sweet to know at even
We are one day nearer home.

One day nearer, sings the mariner,
As he glides the waters o'er,
While the light is softly dying
On his distant native shore.
Thus the Christian on life's ocean,
As his life-boat cuts the foam,
In the evening cries with rapture,
I am one day nearer home.

Nearer home! Yes, one day nearer
To our Father's house so bright—
To the green fields and the fountains
In the land of pure delight;
For the heavens grow brighter o'er us,
And the lamps hang in the dome;
And our tents are pitched still closer,
For we're one day nearer home.

A SONG IN THE NIGHT.

My soul, be not so anxious about the reason of thy peace. Is it not written that there is a peace which passeth understanding? What is that hut a song in the night? It is one of the songs without words. It gives no explanation of its music. Clouds and darkness may be around about thee, and yet thou mayest be able to sing.

Do not distress thyself to find a cause for thy joy. Hast thou not read of a bush that was all in flame, and yet was not consumed? The facts were all against its permanence; it was unreasonable that it should live. But it did live, and why? Because there was a voice speaking within it, singing within it, against facts, spite of reason, in defiance of circumstances. It was a song of words, a comfort without cause, a strength without angelic legions.

So, oftentimes, shall it be with thee. There shall be moments in which thy Gethsemane shall reveal no flower, in which the cup shall not pass, in which the legions of angels shall not come; and yet, strange to say, thou shalt be strong.

Thou shalt fly without pinions; thou shalt walk without feet; thou shalt breathe without air; thou shalt laugh without sunshine; thou shalt bless without knowing why, for the song of thy heart shall itself be thy light, and thy joy shall be only from God.—George Matheson, D.D.

SUNDAY FEEDING.

Under the heading of the "Sunday Penalty of Irregular Feeding," the "Medical Record" points out that in our progress from barbarism we have evolved a people with whom regularity in eating is absolutely necessary to good health. As a result of this artificial existence the secretions are poured out and ready for action with the monotony of clockwork. If this custom is neglected the violator not only suffers bodily discomfort, but an actual injury is done to the digestive apparatus, which has been so educated that it requires a definite amount of exercise and positive promptness in feeding that requirement. The stomach having poured out its secretions, as customary, waits only a short time before allowing them to be absorbed without the accompanying nutrition which goes to the formation of more secretions. After a few such experiences the secretions become less in amount and activity, and indigestion ensues. Dyspeptics are ordered to eat at inflexibly regular intervals. Normal stomachs are by no means many, yet this rule, so imperative to sufferers, is regularly disregarded by the well. Once a week the three regular meals are replaced by late rising and abstinence, followed by gluttony. The gastric juices know nothing of a seventh day of "rest," and the result is discomfort, stupidity and loss of appetite on Monday.

GOD'S LOVE.

Human love may change. The friendship of last year has grown cold. The gentleness of yesterday turned to severity. But it is never thus with God's love. It is eternal. Our experience of it may be variable, but there is no variability in the love. Our lives may change, our consciousness of his love may fade out, but the love clings forever; the gentleness of God

abides eternal. "For the mountains shall depart, and the hills be removed, but my kindness shall not depart from thee, neither shall the covenant be removed, saith the Lord that hath mercy on thee."

There was never a moment nor any experience in the life of the true Christian from the heart of which a message may not instantly be sent up to God and back to which help may not instantly come. God is not off in some remote heaven merely. He is not away at the top of a long, steep life-ladder, looking down upon us as we struggle upward in pain and tears. He is with each one of us on every part of the way. His promise of presence is an eternal present tense: "I am with thee." So "Thou, God, seest me" becomes to the believer a most cheering and inspiring assurance.

CRITICAL MOMENTS.

Many of the misfortunes and disasters which afflict humanity come in consequence of carelessness and neglect at some particular moment. The man who "didn't think" finds the labor of a lifetime wasted. The woman who "didn't think" finds her plans disarranged and her efforts vain because of some lack of watchfulness at a particular time. It is a great thing to know when a critical time has come, to grasp the opportunity or grapple with a difficulty; to resist the adversary and conquer in the strife; and in order to do this we must watch continually, yea, more, we must beseech the Lord to watch over us, and to guide us with his eye.

There is no moment when we can safely cease to watch. There is no hour which may not prove the hour of defeat and overthrow, if we neglect to improve it. So day by day we must watch. Watch against evil; watch against sin; watch and pray lest we enter into temptation. "Watch ye, therefore, and pray always, that we may be accounted worthy to escape all these things that shall come to pass, and to stand before the Son of man."—The Christian.

SPIRITUAL CRIPPLES.

Looking abroad among Christians, how many evidences do we meet with of general shortcoming? Some seem without arms; they never help any one over rugged places in life. Some seem without feet; they never go an inch out of their way to serve others. Some seem voiceless; they never, even by word, encourage any one who is cast down. Some seem deaf; they never listen to the voice of suffering. Some seem without hearts; they do not seem to know what sympathy and generous feelings are. What an appearance a procession of such characters would make if they could be seen as they are in public streets. Many seem to have no ears; and the Savior might well exclaim, "He that hath ears to hear, let him hear."

BE GOOD FOR SOMETHING.

"He has good material in him," we often hear it said of some young man, and we count the words a commendation. But, after all, they count for very little. A pile of boards is good material, but it can be built into a church or a prison, a home or a place of infamy. Iron is good material, but out of it can be formed a railing to protect or a chain to imprison. A person must not only have good material in him, but he must make good use of it, or he is a mere cipher in the world, and might as well never have been born.

A SELF-DELUSION.

Men cheat themselves; they mix their ambition and their philanthropy, and persuade themselves that philanthropy is the horse in the shafts of the chariot when it is ambition only. It is the wolf in sheep's clothing—the bear with the cow's skin covering his ferocity.—Reuben Thomas, D.D.

CRIPPLE CREEK INVESTMENTS.

Big fortunes have been made by a small investment in Cripple Creek stocks, and the way many have suddenly acquired wealth would make interesting reading. We can not here go into details, but if you will write us we will suggest a plan that will materially improve your pecuniary condition. We have something special to offer, and it will cost you nothing to send us your name and get on our list for Cripple Creek literature. Our facilities in the stock business are unexcelled. Address The Mechem Investment Company, Colorado Springs, Colorado.

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PRIZES AWARDED IN THE AUGUST WORD CONTEST.

SPRINGFIELD, OHIO, September 6, 1897.

MAST, CROWELL & KIRKPATRICK, Publishers Farm and Fireside.

Dear Sirs:—We, the judges in your August Word Contest, after a careful examination of the lists of words submitted to us, formed from the letters in the word "Beautiful," find that the following persons have formed the largest number of correct words, according to the rules governing the contest, and we therefore award them the prizes:

NAMES OF PRIZE-WINNERS.

ABRAHAM TABER, 21 Lincoln Street, New Bedford, Massachusetts, formed 201 correct and admissible words, and is awarded the first prize—a \$100 bicycle. Mr. Taber's list was received August 30th, at 7 A. M.

MRS. CORA FOSTER, North Lewisburg, Ohio, formed 198 correct and admissible words, and is awarded the second prize—\$30.00 in cash. Mrs. Foster's list was received August 27th, at 3 P. M.

C. W. PEEK, Atlanta, Georgia, formed 197 correct and admissible words, and is awarded the third prize—\$25.00 in cash. Mr. Peek's list was received August 16th, at 3 P. M.

MRS. EFFIE S. FOLTZ, Fowler, Illinois, formed 197 correct and admissible words, and is awarded \$17.50 in cash. Mrs. Foltz's list was received August 30th, at 7 A. M. (See note below.)

T. U. CONNER, Jr., 531 College Street, Macon, Georgia, formed 197 correct and admissible words, and is awarded \$17.50 in cash. Mr. Conner's list was received August 30th, at 7 A. M. (See note below.)

E. B. CANNON, Tabor, Iowa, formed 196 correct and admissible words, and is awarded the sixth prize—\$10.00 in cash. Mr. Cannon's list was received August 7th at 7 A. M.

NOTE.—Owing to the fact that the lists sent by Mrs. Foltz and Mr. Conner arrived at the same time and had the same number of correct and admissible words, it was impossible to tell which one was entitled to the fourth prize and which one to the fifth prize. We therefore took the liberty to divide the fourth and fifth prizes equally between them, which we hope will be entirely satisfactory to all concerned.

The following-named persons came very near being prize-winners: Mrs. Wm. W. Whan, 1539 Philip Street, New Orleans, Louisiana, 195 words; Miss Daisy Hodgson, 1012 Philip Street, New Orleans, Louisiana, 194 words; B. A. Young, Signal, Ohio, 193 words; Walter Newton, Howard, Ohio, 192 words; Robert Doud, Elvaston, Illinois, 191 words; George S. Adams, Clatsop, Oregon, 191 words; Harry Bennett, 2610 Magazine Street, New Orleans, Louisiana, 190 words.

All the other lists contained less than 190 words which were admissible under the rules. In a number of the lists over 200 words were written out, but those not admissible, according to the rules as understood by the judges, were marked out.

Respectfully,

F. PETTICREW.

M. WEIR.

C. E. ROSENFELT.

Judges of August Contest.

TO OUR READERS.

The above report of the judges in our August Word Contest explains itself. By the time this paper reaches our readers the six prizes will be in the hands of the prize-winners. This makes six \$100 bicycles we have given away as prizes this summer, besides a number of other valuable prizes. All of the prizes were awarded impartially and strictly on the merits of the list or guess sent us. Naturally some of the contestants were disappointed. It is aggravating to come so near yet miss a prize, but surely no one holds us responsible for their failure.

This ends our contests for the season. Perhaps next summer we will again offer some big prizes. We invite every reader's attention to the great bargains in premiums offered elsewhere.

Respectfully,

MAST, CROWELL & KIRKPATRICK,
Publishers Farm and Fireside.

Our Miscellany.

USE COLOR JUDICIOUSLY.

There are colors that are refreshing and broadening, others that absorb light and give a boxed-up appearance to a room, others that make a room with a bleak northern exposure, or with no exposure at all, appear bright and cheerful; some that make a room appear warm, some that make it cold.

The thermometer seems to fall six degrees when you walk into a blue room. Yellow is an advancing color; therefore, a room fitted up in yellow will appear smaller than it is.

On the other hand, blue of a certain shade introduced generously into a room will give an idea of space. Red makes no difference in regard to size. Green makes very little.

If a bright, sunny room gets its light from a space obtained upon by russet-colored or yellow-painted houses, or else looks out upon a stretch of green grass, it should be decorated in a color very different from the shade chosen if the light comes from only an unbroken expanse of sky.

Red brings out in a room whatever hint of green lurks in the composition of the other colors employed.

Green needs sunlight to develop the yellow in it and make it seem cheerful.

If olive or red brown be used in conjunction with mahogany furniture, the effect is very different from what it would be if blue were used. Blue would develop the tawny orange lurking in the mahogany.

If a ceiling is to be made higher, leave it light, that it may appear to recede. Deepening the color used on the ceiling would make it lower—an effect desirable if the room is small and the ceiling very high. Various tones of yellow are substitutes for sunlight.—The Upholsterer.

AN HISTORIAN'S MEMORY.

The members of the Chickamauga national park commission were driving along a country road near the limits of the great battlefield a few days ago, says a St. Louis "Globe-Democrat" correspondent, when General Henry V. Boynton, the chairman of the commission, remarked to his companions in the vehicle:

"About a mile from here there ought to be a church near Ringgold. I haven't seen the place for more than thirty-three years, but I remember going into that graveyard when our army was down here and being impressed with a curious inscription on one of the tombstones. It read like this:

"He lived to enliven the happiness of his parents

Three years, eight months, twenty days. When death tore him from the mountain brow

An angel caught and bore him o'er the sea, And placed him in God's white house, To live and play through all eternity."

The other members of the commission thought this was such a fine chance to test the memory of the war historian that they drove on down the Ringgold road to see that epitaph. In the course of a mile they came to an old country church with a graveyard, as General Boynton had described. They left their carriage, went inside, found the tombstone, and verified the inscription exactly as it had been repeated to them.

A CHILD'S IDEA.

Flossie was seven years old when her mama took her to live in the country. All her life she had lived in the heart of a large manufacturing town, and knew nothing of the beauties of the country. Oh, how delighted she was with the beauties of the fields, the buttercups and daisies! But most of all she loved to hear the lark singing its song of joy far away up in the blue sky. But she never thought it was a bird that sent the sweet, clear music through the air. One day she was sitting in the garden. The lark was not visible; but his song was heard, ever bright and melodious, as it mingled with the soft, sighing summer wind; and the child listened eagerly.

"What are you looking at, Flossie?" said her mama.

"Nothing, mama," answered Flossie.

"Are you listening to the lark? He is too far up for you to see him."

"The lark, mama? Is that the lark?"

"Yes, of course it is. What did you think it was, darling?"

"I thought," said Flossie, with a slightly disappointed look, "it was the angels."—Nora D. Gardner, in The Outlook.

THE FENCE QUESTION.

Now that the harvest season is nearly over the farmer should find time to consider the fence question and decide what he wants in this line during the fall and winter. He should notice the wire fencing manufactured by the DeKalb Fence Co., at DeKalb, Ill., and before purchasing write to the above-named firm for their illustrated catalogue and price-list. It will be sent free to all who ask for it, mentioning that they saw this notice in FARM AND FIRESIDE.

HONEST BUT SHREWD YANKEE.

There was a funny case of international honesty down in Arizona, just on the line between that territory and Mexico. A Yankee farmer lives there, one Amasa Barrow by name, and it is his business to raise chickens. Chicken-feed is cheap in Mexico and chickens bring fine prices in Arizona, but to raise fowls in Mexico and bring them across the boundary or to buy the feed and bring it across would involve the payment of a considerable duty, which would eat the profits about as fast as the hens could eat the corn. As for smuggling that was not to be thought of.

Amasa is a Yankee and is so honest that his neighbors say he wouldn't take advantage of a man in a horse-trade. But he is also full of Yankee ingenuity, and after deep cogitation he built a long, slim hen-coop, one half of it in Arizona and the other in Mexico. On the line there is a gate. Over the line there are barns containing feed. At feeding-time the gate is opened and the chicken fancier shoos his flock into Mexico, where they eat their meal. Then he shoos them back to the protection of the American flag, where they digest this Mexican grain, lay their eggs and carry on their family affairs. Mr. Barrow saves about fifty per cent on grain and makes that much on his chickens, and if there is any smuggling done it is done by the innocent and responsible biddies.—Washington Times.

RESPECT FOR THE NERVES.

Respect for the nerves, then, demands the avoidance of overwork of every kind, whether mental or physical. Too much eating is overwork of the digestive organs, too much bicycle-riding draws too heavily on the heart and lungs, too much thinking or fretting overtaxes the brain. But, in fact, overworking the digestive or assimilative organs or straining the heart or lungs goes to the nerve centers to register the fatal lesion; for so long as the derangement is not beyond the power of vital force to rectify it, it is but temporary and the equilibrium will be restored.

The true theory of living a healthy life would seem to be this: Take care of the nerve centers; to do this, guard against overwork—that is, overexpenditure of nervous force. But a majority, perhaps, of fairly intelligent people do not know when they are making the most destructive inroads upon their vital supply, and such ignorance is very hard to reach with the enlightenment of science. A person of weak stomach by eating a bit of pickle may bring about a nervous waste greater than that caused by a day's hard labor. He has made a demand upon a set of disordered nerves, and they cannot supply the force. It is like heating a poor, weak horse because he cannot draw a load. Excesses are what prevent successes.—Editor's Outlook, in The Chautauquan.

A PRETTY WIDOW WITH A BIG FARM.

Mrs. Adelaide E. Sherry, of West Point, Ind., is the owner and manager of one of the largest farms in the Hoosier state. She is a young widow of versatile capabilities. Her farm of 1,000 acres lies ten miles south of Lafayette and nine miles north of the celebrated Baden Baden springs. Two hundred walnut-trees of fifty years' growth rise from a lawn of four acres surrounding the handsome buildings, giving the estate its name, Walnut Lodge. Mrs. Sherry hires and directs her large corps of assistants, indoors and out, entertains generously, drives over the estate daily, buys pigs and calves, ships Percheron horses to Germany, cattle and hogs to Chicago, cribs annually an average of 10,000 bushels of corn, travels extensively, and writes for publications. Mrs. Sherry has lately returned from a sojourn in the Holy Land, and, "after husking is done," she purposes investigating occult philosophy among the Mahatmas in their mountain abodes in India.

A NECESSITY IN EVERY HOME.

MUSIC THAT SOOTHES, CHEERS, ELEVATES AND INSPIRES—A REMARKABLE PROPOSITION.

This is our thirty-sixth year of business. During our existence as a firm of piano and organ manufacturers we have issued many beautiful catalogues; but to commemorate our thirty-sixth anniversary we are now issuing an entirely new catalogue—an art souvenir of surpassing beauty and interest. The front page of the cover has a reproduction in colors of a remarkable oil painting, the subject of which is "An Ancient Egyptian Choir," a band of Old World singers and players, showing the curious musical instruments used in the land of the Pharaohs a thousand years before the Christian era. We will send this elegant catalogue free to any intending purchaser of a piano or organ who will mention this paper. It describes all our latest models of the Cornish American pianos and organs for 1898, and gives lowest prices and terms of sale at factory cost—full particulars given of our unique method of business, factory to family direct, saving all agents' and middlemen's profits. Ask for the New Catalogue 1898 Models and write to-day. Address CORNISH & Co., Washington, New Jersey. Established thirty-six years.

FRIENDLY PERSECUTION IN SICKNESS.

How many invalids would protest, if they dared, against the persecutions they are compelled to endure from friends who feel it their duty to call and condole with the sick. One sufferer breaks out in this manner:

"I feel as if I had just been to my own funeral, and it was a very sad affair."

"How so?"

"I was killed by a friendly call. My neighbor over the way, with a face as solemn as an owl, has just been in to see me, and he kindly remarked that I was so changed he shouldn't have known me, and he hoped I'd pull through, which meant, 'I'm sure you can't last long, poor fellow!' and had I heard that J—, who was taken sick at the same time I was, had been given up by the doctors? He mentioned several other equally cheerful items, which made me feel as if I should fly into a thousand pieces!"

"A call like that is enough to kill anybody who doesn't know how to resist the influence of such sympathy. Heaven save the mark if that is sympathy! I call it torture. I do wish my friends would talk to me of something besides myself, and how I look, and how I feel, for I am reminded of all that far too often. If they want to show their friendship and help me get well, they will help me to forget myself and all my difficulties. Pray throw open the windows and let in the sunshine to dry off the dampness and gloom of that neighborly call."—Science of Health.

NOT HARD TO DO.

The first letter the answers-to-queries man opened, as he sat down at his desk, contained this question:

"Please tell me the best method of preparing young onions so they will leave no taint on the breath."

"That's easy," he muttered, and seizing his pen he wrote as follows in reply:

"As good a way as any is to slice the onions, soak them for five minutes in pure cider vinegar, add a small carrot cut into pieces about the size of a pea, salt to taste, stir in a pinch of white pepper; put the mixture into a quart jar, screw up tight, and put away in the cellar for twenty years. Prepared in this manner they will not affect the breath in the slightest degree."—Chicago Tribune.

MINE BOUGHT FOR 90 CENTS, SOLD FOR \$8,000.

Dame Fortune is capricious in every country, but particularly so among the mines. Richard Lockey, as well as hundreds of other Montana men, has reason to know that such is the case, although fortune, on the whole, has been kind to him. Mr. Lockey many years ago bought the Diamond mine, the principal claim of the group now being operated by the Diamond Hill Company, for ninety cents. The group of claims was bought last year by the Scotch syndicate now in possession for a sum supposed to be \$1,800,000, but Mr. Lockey did not make the difference between the sum he paid for it and the latest purchase price. However, he has no complaints to offer, for the property he bought for ninety cents he afterward sold for eight thousand dollars, and he has always contended that his share of that amount was the easiest money he ever made.—Montana Independent.

MOSQUITOES AND FLIES FIGHT.

A Camden (Delaware) farmer tells a story of a queer combat between a swarm of flies and mosquitoes over the possession of a horse. The animal was grazing in a meadow when a huge cloud of mosquitoes surrounded it. The horse became frantic and rushed around the field, when a swarm of the big flies attacked it. Then the cloud of mosquitoes and flies became mixed, and the air was filled with a strange noise, but every moment some mosquitoes or flies were seen to drop to the earth. The horse was covered with blood, the mosquitoes abandoning their prey to the flies.

KEEPING THE OLD MAN COWED.

While stopping one night at a farm-house in Missouri, a traveler was astonished to see his hostess walk up to her husband about every fifteen minutes and box his ears or give his hair a pull. In the morning the guest, seeing the woman alone, asked an explanation of her conduct, and her reply was: "You see, stranger, me and the old man has been fightin' for ten years to see who shall boss this 'ere ranch, and I have jest got him cowed, but if I should let up on him for a day he would turn on me again, and my work would all go for nothin'."

BED-WETTING CURED or no pay. Mrs. B. Rowan, Milwaukee, Wis.

This \$5.00 Outfit FREE

The 44 tools and articles in this outfit, purchased singly in retail hardware-stores, would cost not less than \$5.00. We have sold thousands of the outfits in the past few years at \$3.00 each; but owing to the breaking up of the steel trust, and the low price of iron and other raw materials, we are enabled to have them manufactured for a less price than ever before and still furnish a better outfit. In order to sell more outfits this season than ever before, we have decided to give the purchaser the benefit of the lower cost price; also most of our profit (it is the subscription we want); therefore, we offer this

\$5 OUTFIT FOR \$2 OR GIVEN FREE FOR A CLUB AS PER OFFER BELOW.

A COMPLETE OUTFIT OF TOOLS AND MATERIALS FOR BOOT, SHOE, RUBBER, HARNESS AND TINWARE REPAIRING.



Consisting of 44 First-class Tools and Materials Shown in Cut, namely:

1 Iron Last for Men's Work (reversible); 1 Iron Last for Boys' Work (reversible); 1 Iron Last for Women's Work (reversible); 1 Iron Last for Children's Work (reversible); 1 Iron Stand for Lasts; 1 Shoe-hammer; 1 Shoe-knife; 1 Peg-awl Handle; 1 Peg-awl; 1 Wrench for Peg-awl Handle; 1 Sewing-awl Handle; 1 Sewing-awl; 1 Stabbing-awl Handle; 1 Stabbing-awl; 1 Bottle Leather Cement; 1 Bottle Rubber Cement; 1 Bunch Bristles; 1 Ball Shoe-thread; 1 Ball Shoe-wax; 1 Pkg. Clinch-nails, 4-8 in.; 1 Pkg. Clinch-nails, 2-3 in.; 1 Pkg. Clinch-nails, 6-8 in.; 1 Pkg. Heel-nails; 4 Pts. Heel-plates, assorted sizes; 6 Harness-needles; 1 Harness and Saw Clamp; 1 Box Slotted Rivets, assorted sizes; 1 Rivet-set for same; 1 Harness and Belt Punch; 1 Soldering-iron, ready for use; 1 Handle for same; 1 Bar Solder; 1 Box Resin; 1 Bottle Soldering-fluid; 1 Copy Directions for Half-soling, etc.; 1 Copy Directions for Soldering.

All these tools are full-sized and practical in every respect; in fact, they are the same tools, etc., used by regular shoe and harness makers everywhere. We guarantee the outfit to give entire satisfaction or money refunded.

PRICE OF OUTFIT, AND FARM AND FIRESIDE ONE YEAR, \$2.00.

We want clubs; we want to increase the number of Farm and Fireside subscribers in every neighborhood, so there must be club-raisers. Now, every man is worthy of his hire, so we make the following very, very liberal offer. First let us explain that railroads will not recognize a fraction of the first hundred pounds; so five outfits can be sent (to one address) as cheap as one outfit alone. From your neighbors

Get Four Orders, Send Us Eight Dollars, and We Will Send to You FIVE Outfits, and to Each of the Five Persons Farm and Fireside One Year.

The outfit will be shipped by freight, the charges to be paid by the receiver in every case. One outfit weighs 20 pounds; five outfits (to one address), 100 pounds. Parties ordering from the far West or South should first learn from their freight agent what the charges will be. Freight charges are the same whether sent prepaid or collect. When freight office is different from post-office be sure to give both.

Address FARM AND FIRESIDE, Springfield, Ohio.

Smiles.

JOHNNY IN THE HARVEST-FIELD.

Father and mother and sister Lil
Are down by the dark blue sea,
And I'm on the farm with Uncle Bill,
Who is making it hot for me!

TWO INKY WAYS.

There was a man who advertised
But once—a single time.
In print obscure placed he his ad.,
And paid for it a dime.

And just because it didn't bring
Him customers by score,
"All advertising is a fake,"
He said, or rather, swore.

He seemed to think one hammer-tap
Would drive a nail clear in;
That from a bit of tiny thread
A weaver tents could spin.

If he this reasoning bright applied
To eating, doubtless he
Would claim one little bite would feed
Ten men a century.

Some day, though, he will learn that to
Make advertising pay
He'll have to add ads. to his ad.,
And advertise each day.

—E. G. Townsend, in New York Sun.

HIS DELICATE CONSTITUTION.

AWTHAW—"How do, old fel?"
Weginald—"How do, deah hoy?"
Awthaw—"Did you—aw—celebrate
the queen's—aw—jubilee?"
Weginald—"Of course, deah hoy. I
sang 'God Save the Queen,' don't y' know, all
day. Did you—aw—celebrate, old chap?"
Awthaw—"Aw, no. You see, deah boy, I
was afraid I might offend the—aw—pvince,
don't y' know, if he should hear I had ex-
pressed satisfaction at the long weign of the
queen."—Town Topics.

EXCUSED.

"You wish to be relieved from jury duty,
but you haven't a good reason," said the
judge.
"It's public spirit," said the unwilling
talesman, "ou the score of economy. I have
dyspepsia, judge, and I never agree with any-
body. If I go on this jury there will be a
disagreement, and the county will have to
go to the expense of a new trial."
"Excused," said the judge.—Green Bag.

HER SOLE QUALIFICATION.

Mrs. Bagro—"Tell, me, professor, will my
daughter ever become a great pianist?"
Herr Vogleschuitze—"I gaunot dell."
"But has she none of the qualifications
necessary for a good musician?"
"Ach! Yah, matam, she has two handts."
—Puck.

NOT WESTERN BEEF.

Fair customer—"Is this western beef?"
Eastern butcher (proudly)—"No, ma'am; we
don't deal in ill-mannered steers from the
rowdy West. This beef, madam, is from
a highly cultivated and very refined cow, for-
merly of Boston."—New York Weekly.

NO ADVANTAGES SECURED.

"Things do not seem to be equalized in this
life," complained the man with one leg.
"I am at a disadvantage when walking, and
I secure no concessions from my tailor be-
cause of having but one leg."—New York
World.

OFFERED A BARGAIN.

"Do you think it's true that every man
has his price?" asked the heiress.
"I'm sure I don't know," he answered,
thoughtfully, "but if you want a bargain
you needn't look any farther."—Chicago Post.

IT'S DIFFERENT NOW.

"Are you going to spend your vacation at
the sea-coast this summer, Charles?"
Charles—"No. The boss put in a cash reg-
ister a couple of months ago."—San Fran-
cisco Examiner.

HAPPY INNOCENCE.

The wife—"What a sweet smile there is on
the baby's face, John."
The husband—"Yes; he's probably dream-
ing that he's keeping me awake."—Town
Topics.

STILL BEHIND.

"This," said the iceman, "is the time of
year when I cut considerable ice."
"You," said the kitchen lady, "don't cut
half as much as you are paid for."—Youker's
Statesman.

LITTLE BITS.

First Populist—"Wouldn't you like to see
the railroads carryin' ns all free?"

Second Populist—"I dunno. I think the
millionaires ought to be made to pay their
fare."

Mrs. Youngish—"Oh, Bob! what shall I do?
Baby is crying because I won't let him pull
all the fur off my new muff."

Mr. Youngish—"Well, that's all right. Give
him the cat."—Tid-Bits.

Young mother (on the train)—"Mommy's—
itty—pitty—peshus lammy—angel—drlie—
desde-tweet-estingateyived, atstutits."

Old gent (seat in front)—"And they blame
a man for cursin' the mother tongue!"

Madge—"I think Jack is going to propose
to me soon, mama."

Her mother—"Why do you say that?"

Madge—"He took me out to look at some
tandem wheels last evening."—Philadelphia
American.

Mabel—"Mr. Sweetser tells me I am the
only woman in the world he cares anything
about."

Edith—"I suppose he doesn't class May
Golding among women. I know he always
calls her an angel."—Boston Transcript.

"This bicycle war is a great boon to the
public. A good machine is now within reach
of the average pocket-book."

"I say it's a heastly shame! I bought my
bicycle for one hundred and five dollars on
the instalment plan—and I'm still paying
for it."

Officer—"Yls, th' Dutch an' th' Oirlsh do
he great paaple. Shure, 'tis all th' law biz-
ness av th' counthry thot's in their hands."
Dinkelspiel—"How vos dot?"

Officer—"Why, 'tis th' Dutch thot makes
th' beer, an' th' Oirlsh thot make th' arrists,
do yez moind?"

Kansas Populist orator—"I tell you, my
friends, the sturdy farmers of Kansas are
standing face to face with hunger and want."

Voice—"Why don't they make a kick?"

Kansas Populist orator—"Well—er—they're
so busy harvesting their enormous wheat
crop that they haven't time just now."

A professor of Trinity College, Dublin,
overhearing an undergraduate making use of
profane language, rushed at him frantically,
exclaiming:

"Are you aware, sir, that you are imperil-
ing your immortal soul, and, what is worse,
incouring a fine of five shillings?"—House-
hold Words.

Widower (after seance)—"You say these
spirits are with us all the time, guidin' an'
pertain' us?"

Medium—"Yes."

Widower (with conviction)—"Then that
wa'u't my wife! Ye see, I hegun chewin'
ag'in the day after th' fun'ral, 'n' she never
said nothin' about it."

"It is getting," said the pessimistic man,
"that a United States senator can't preserve
his self-respect."

"Oh, I dunno," said the optimist. "There
are chances for him to clear enough to make
him have a pretty good opinion of himself."
—Indianapolis Journal.

Diogenes was on foot, with a bicycle lan-
tern.

"Why do you carry that lantern?" inquired
the king.

"I am looking for the best wheel on the
market," quoth Diogenes, "and up to the
present date each man I have met has rec-
ommended a different one."—Washington
Capitol.

A little girl has an uncle who taught her
to open and shut his crush hat. One eve-
ning, however, he appeared with an ordinary
silk hat, which he left in the hall. Presently
he saw the child coming with his new hat
crushed into accordion plaits.

"Oh, uncle," she cried, "this one is very
hard. I've had to sit on it, but I can't get
it more than half shut."—Household Words.

"That whole Pompeian trouble might have
been avoided," observed Diomed to Caesar,
as the two sat on the banks of the Styx
talking about the misfortune which befell
that city, "if we'd only had had an effi-
cient city government."

"Bah!" said Caesar. "You couldn't have
made Vesuvius quit with an ordinance."

"Didn't say we could," retorted Diomed.
"But if the street-cleaning department had
seen to the removal of the ashes promptly."

"Ah," said Caesar, "quife so."—Harper's
Bazar.

It is said that General Skobelev, on the
eve of the battle of Plevna, offered to a
soldier the choice between one hundred rubles
and the cross of St. George for having saved
his life. Said the young soldier:

"The cross of St. George? What is it worth,
the cross of St. George?"

Replied Skobelev:

"My good fellow, it is not for the worth
of the thing, but for the honor, that I offer
it to you. The cross itself is worth no more
than five rubles."

The soldier clinched matters by answering:
"Well, then, I'll have the cross of St. George
and ninety-five rubles."—Philadelphia Ledger.

MRS. CURTIS, NEW YORK,

Tells Her Experience With Ovaritis.

A dull, throbbing pain, accompanied
by a sense of tenderness and heat low
down in the side, with an occasional
shooting pain, indicates inflammation.

On examination it will be found that
the region of pain shows some swelling.
This is the first stage of ovaritis, in-
flammation of the ovary. If the roof of
your house leaks, my sister, you have
it fixed at once; why not pay the same
respect to your own body?

Do you live miles away from a doc-
tor? Then that is
all the more reason
why you should at-
tend to yourself at
once, or you will
soon be on the flat
of your back.

You need
not, you
ought not
to let your-
self go,
when one of
your own
sex holds out the help-
ing hand to you, and
will advise you without money and
without price. Write to Mrs. Pinkham,
Lynn, Mass., and tell her all your symp-
toms. Her experience in treating female
ills is greater than any other living per-
son. Following is proof of what we say:

"For nine years I suffered with fe-
male weakness in its worst form. I
was in bed nearly a year with conges-
tion of the ovaries. I also suffered
with falling of the womb, was very
weak, tired all the time, had such
headaches as to make me almost wild.
Was also troubled with leucorrhœa,
and was bloated so badly that some
thought I had dropsy. I have taken
several bottles of Lydia E. Pinkham's
Vegetable Compound, and several of
her Blood Purifier, and am completely
cured. It is a wonder to all that I got
well. I shall always owe Mrs. Pink-
ham a debt of gratitude for her kind-
ness. I would advise all who suffer
to take her medicine."—MRS. ANNIE
CURTIS, Ticonderoga, N. Y.

Don't Stop Tobacco

Suddenly, to do so is injurious to the nervous sys-
tem. Baco-Curo is the only cure that cures while
you use tobacco. It is sold with a written guarantee
that three boxes will cure any case, no matter how
bad. Baco-Curo is vegetable and harmless; it has
cured thousands, it will cure you. At all druggists,
50 cts. and \$1 per box; 3 boxes, \$2.50. Booklet free.
EUREKA CHEMICAL & MFG. CO., La Crosse, Wis.



\$75.
Per Month and
EXPENSES
paid any active
man or woman if
right. Goods sold
by sample only. We
furnish horse and
buggy, also samples
and money and we will mail you the Ring.
FREE. Full particulars upon request. Address
IMPORTER, P. O. Box 5308, Boston, Mass.

LADY CANVASSERS

Wanted immediately, to take orders and make col-
lections in a line especially congenial and profitable.
NOTHING EVER SEEN LIKE IT. Besides carrying
all expenses, the business will bring you in a LARGE
CASH INCOME for many months. Supplies fur-
nished free. Address DEPARTMENT OF AGENTS,
FARM AND FIRESIDE, SPRINGFIELD, OHIO.

A BIG OFFER
50c. MADE IN A
MINUTE! If you
will hang up in the
P. O., or some public
place, the two show
bills that we send, we will give you a 50c. cert., and send it in
advance with samples and bills. This will trouble you about
one minute, and then if you want to work on salary at \$50
or \$100 per month, let us know. We pay in advance.
GIANT OXIE CO., 126 Willow St., Augusta, Me.

GOLD RINGS FREE!
We will give one half-round Ring,
18k Rolled Gold plate and war-
ranted to anyone who will sell
1 doz. Indestructible Lamp Wicks
(need no trimming) among friends at 10c. each. Write us
and we will mail you the Wicks. You sell them
and send us the money and we will mail you the Ring.
STAR CHEMICAL CO., Box 453, Centerbrook, Conn.

I WANT A MAN

In every city or township to look after my business,
on salary or commission; steady work and liberal
pay the year round. One man cleared \$140.45
last week. Places for a few ladies. Don't delay
or bother to send stamps, but write at once to
J. W. JONES, Springfield, Ohio.

\$18 a Week Easy
You work right
around home. A
brand new thing.
No trouble to make \$18 a week easy. Write to
us quick, you will be surprised at how easy it can
be done. Send us your address anyway. It will be for your interest
to investigate. Write today. You can positively make \$18 a week
easy. ROYAL MANUFACTURING CO., BOX 43, DETROIT, MICH.

SELL YOUR BRAINS by getting a patent on
that idea of yours. Write
us and we will advise you fully. We can make you
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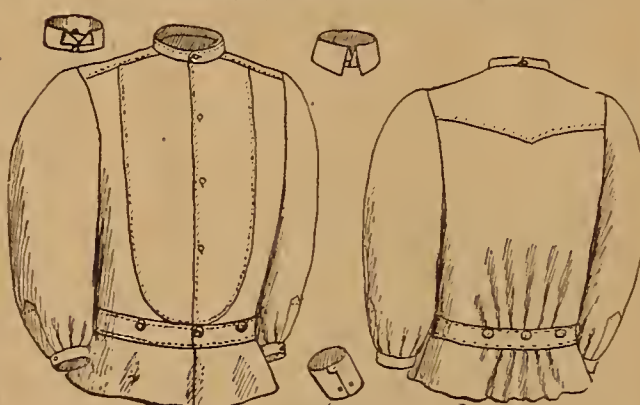
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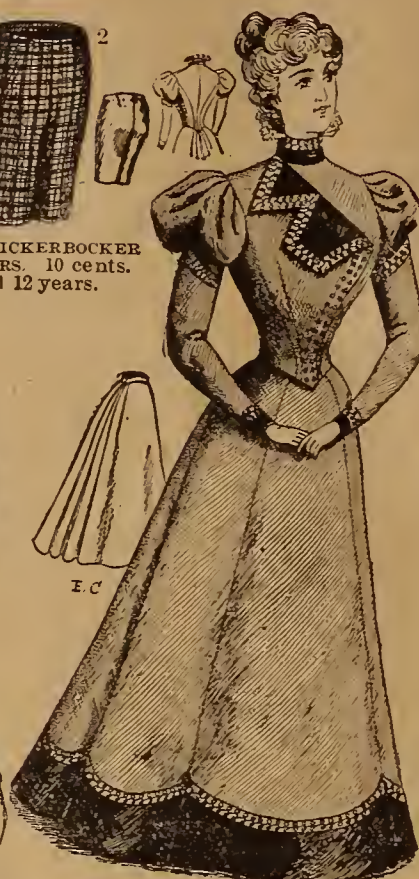
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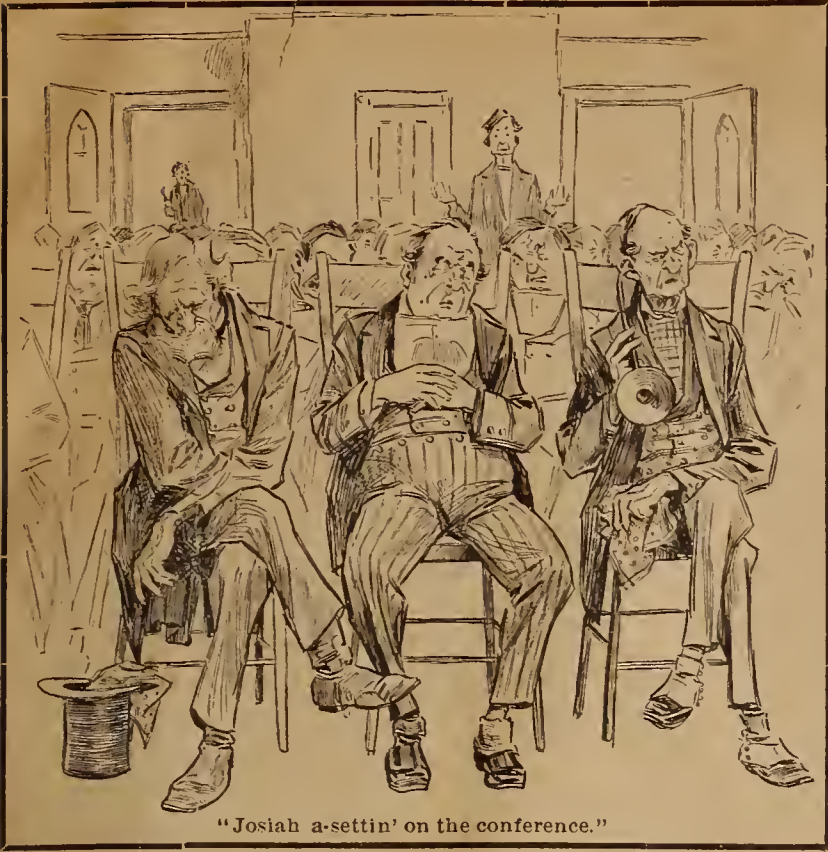
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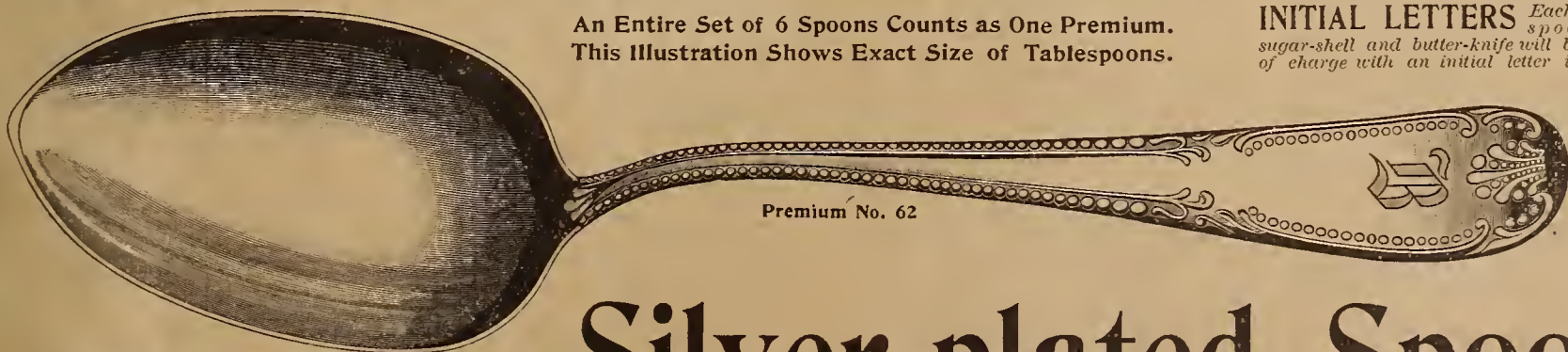


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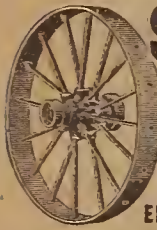
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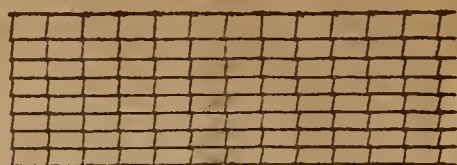
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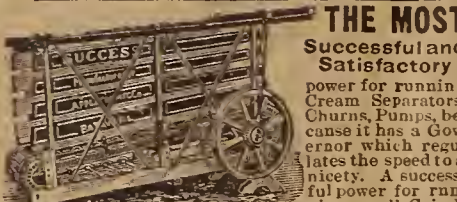
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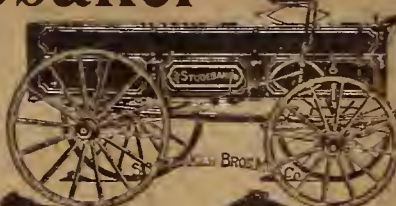
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